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Annual Report

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**MASSACHUSETTS
BAY
TRANSPORTATION
AUTHORITY**

500 Arborway, Boston, Mass. 02130

NINTH ANNUAL REPORT / 1973

MASSACHUSETTS BAY

TRANSPORTATION AUTHORITY

TO:

His Excellency the Governor
The General Court, and
The Advisory Board to the
Massachusetts Bay Transportation Authority

In accordance with the requirements of Section 5(h) of Chapter 161A of the General Laws, the Directors of the Massachusetts Bay Transportation Authority herewith render the ninth report of the Authority covering operations for the calendar year 1973.

SUMMARY OF THE NET COST OF SERVICE
JANUARY 1, 1973 - DECEMBER 31, 1973

The Authority's net assessable cost of service to the 79 cities and towns in the District was \$52,341,827.38.

Total income amounted to \$60,600,483.57 and total current expenses were \$166,207,765.86, leaving a cost of service in excess of income of \$105,607,282.29.

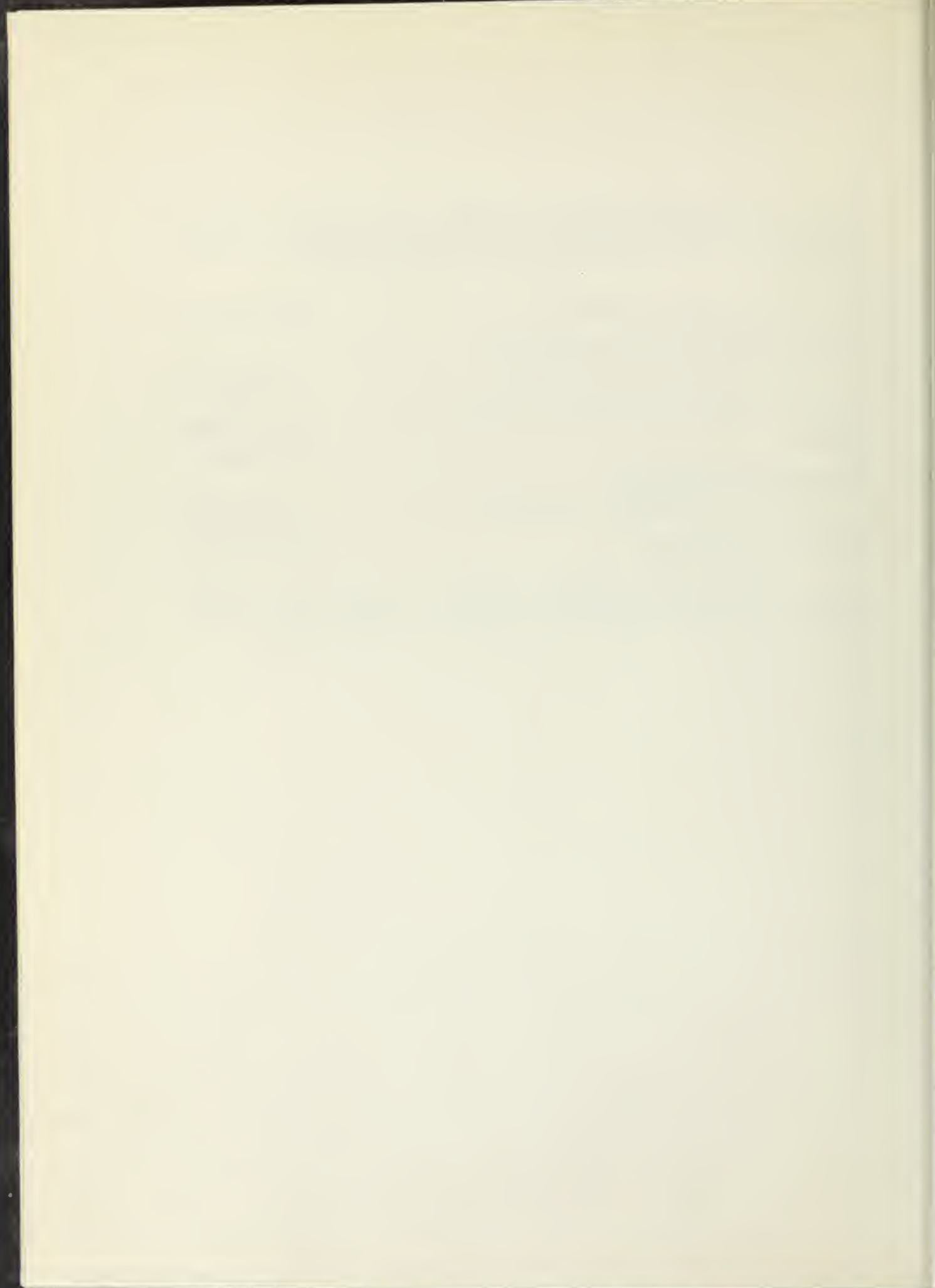
The difference between the cost of service in excess of income and the net assessable cost of service resulted from state reimbursement for the Authority's debt service and commuter railroad subsidies, unreimbursed depreciation, amortization, and interest on Penn Central Loan, and additional State aid of \$35,000,000. provided under Section 16, Chapter 1140, Acts of 1973.



In addition to the net assessable cost of service, there are three other items which must be considered by the 79 cities and towns in their 1974 account settlement with the Commonwealth. These are:

Net Assessable Cost of Service	\$52,341,827.38
Interest Charged by State Treasurer on Temporary Borrowings (Estimated)	3,330,800.00
Expenses of Boston Metropolitan District	<u>16,000.00</u>
SUBTOTAL	\$55,688,627.38
Less Pupils' Reimbursement Chapter 17, Section 7B (Estimated)	<u>1,000,000.00</u>
NET COST TO COMMUNITIES	\$54,688,627.38

The following statement illustrates the Authority's net cost of service including all elements of cost for calendar year 1973 and the apportionment of these costs by express and local service.

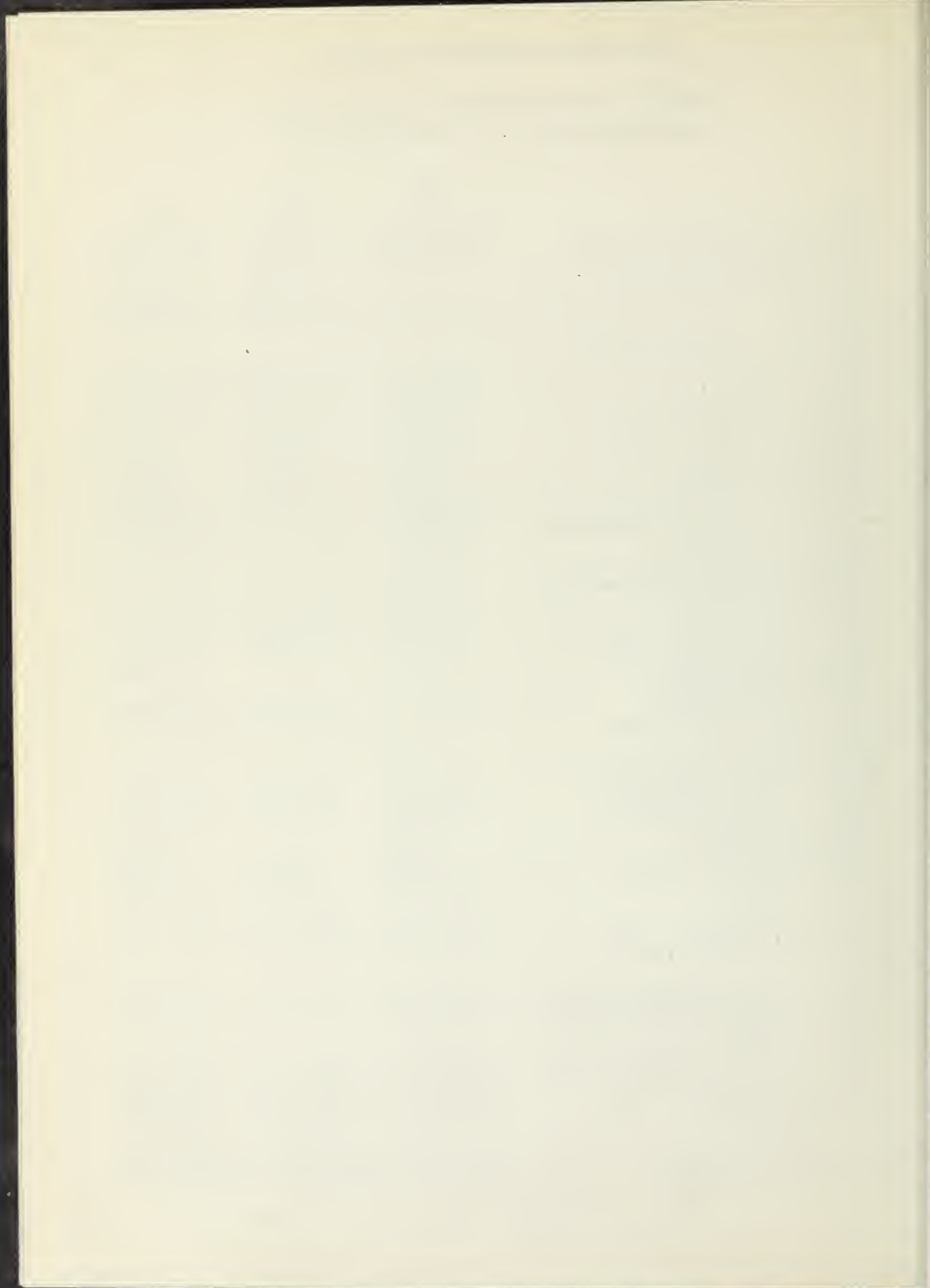


MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

STATEMENT OF NET COST OF SERVICE - BY EXPRESS AND LOCAL

CALENDAR YEAR JANUARY 1, 1973 TO DECEMBER 31, 1973

	<u>Express Service</u>	<u>Local Service</u>	<u>Total</u>
Income:			
Revenue from Transportation	\$26,659,774.29	\$25,549,430.97	\$52,209,205.26
Revenue from Other Rwy. Operations	1,138,199.59	313,850.33	1,452,049.92
Non-Operating Income	4,453,969.67	1,717,026.81	6,170,996.48
Gas & Diesel Tax Reimbursement	-	359,038.91	359,038.91
Reimbursement from Outside Communities	-	409,193.00	409,193.00
TOTAL INCOME	\$32,251,943.55	\$28,348,540.02	\$60,600,483.57
Operating Wages and Fringe Benefits:			
Wages	43,142,602.60	44,783,390.49	87,925,993.09
M.B.T.A. Pensions	5,085,338.15	5,509,116.33	10,594,454.48
Social Security Taxes	1,882,642.12	2,039,528.97	3,922,171.09
Workmen's Compensation	518,542.04	561,753.87	1,080,295.91
Accident and Sickness Insurance	252,840.15	273,910.17	526,750.32
Group Life Insurance	395,452.41	428,406.77	823,859.18
Blue Cross-Blue Shield	3,479,226.34	3,769,161.87	7,248,388.21
Unemployment Insurance	19,182.00	20,780.50	39,962.50
Uniform and Work Clothes	80,866.41	155,504.30	236,370.71
TOTAL OPERATING WAGES AND FRINGE BENEFITS	54,856,692.22	57,541,553.27	112,398,245.49
Material and Other Items	5,473,879.55	6,966,755.79	12,440,635.34
Injuries and Damages	369,300.80	928,213.23	1,297,514.03
Depreciation/Amortization/Interest on			
P.C. Loan	9,414.64	(1,309,766.10)	(1,300,351.46)
Interest on Unfunded Debt	1,259,730.01	1,364,707.51	2,624,437.52
Fuel	4,148,948.08	1,436,231.04	5,585,179.12
Taxes (Other than included above)	79,834.37	611,961.96	691,796.33
Railroad Commuter Subsidy	8,833,506.85	-	8,833,506.85
Middlesex & Boston Subsidy	-	-	-
Rapid Transit Inc. Subsidy	-	260,547.86	260,547.86
TOTAL OPERATING EXPENSES AND TAXES	75,031,306.52	67,800,204.56	142,831,511.08
Fixed Charges:			
Interest on Funded Debt (M.T.A.)	3,091,726.76	1,030,575.59	4,122,302.35
Interest on Funded Debt (M.B.T.A.)	8,689,361.83	676,509.86	9,365,871.69
Payment on Funded Debt (M.T.A.)	2,268,018.51	1,221,240.76	3,489,259.27
Payment on Funded Debt (M.B.T.A.)	5,155,000.00	1,196,113.50	6,351,113.50
Cambridge Subway Rental	7,511.64		7,511.64
Miscellaneous Debits	9,176.53	3,058.84	12,235.37
Bank Service Charges (M.B.T.A.)	25,724.08	2,236.88	27,960.96
TOTAL FIXED CHARGES	19,246,519.35	4,129,735.43	23,376,254.78
TOTAL CURRENT EXPENSES	94,277,825.87	71,929,939.99	166,207,765.86
COST OF SERVICE IN EXCESS OF INCOME	62,025,882.32	43,581,399.97	105,607,282.29
Less:			
State Fin. Contract Assistance - M.T.A.	3,000,000.00	-	3,000,000.00
State Fin. Contract Assistance - M.B.T.A.	10,903,533.37	1,148,327.29	12,051,860.66
State Fin. Contract Assistance on			
Railroad Subsidy	4,513,945.71	-	4,513,945.71
State Fin. Contract Assistance - Chapter			
1140, Acts of 1973 - M.B.T.A.	13,362,287.47	21,637,712.53	35,000,000.00
TOTAL CONTRACT ASSISTANCE	31,779,766.55	22,786,039.82	54,565,806.37
NET COST OF SERVICE	30,246,115.77	20,795,360.15	51,041,475.92
LESS - UNREIMBURSED DEFICIT	9,414.64	(1,309,766.10)	(1,300,351.46)
NET ASSESSABLE COST OF SERVICE	\$30,236,701.13	\$22,105,126.25	\$52,341,827.38

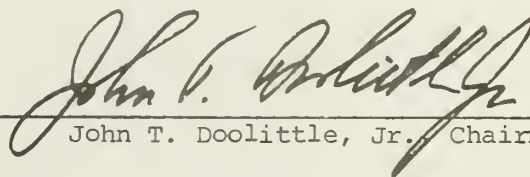


The balance sheet and statement of long-term debt of the Massachusetts Bay Transportation Authority as of December 31, 1973, and the related statements of revenue and cost of service, unreimbursed cost of service, and source and disposition of funds for the fiscal year ended December 31, 1973, together with notes relating to these financial statements are appended to this report.

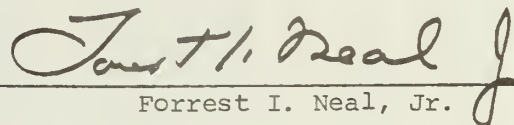
Respectfully submitted,

Board of Directors

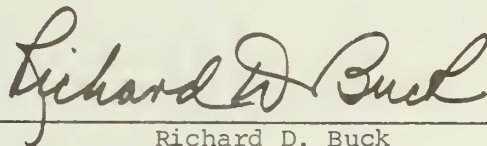
Massachusetts Bay Transportation Authority



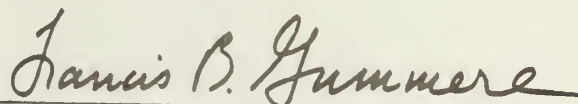
John T. Doolittle, Jr., Chairman



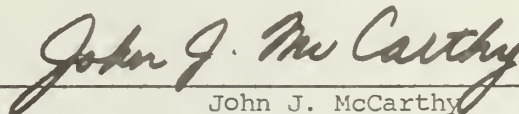
Forrest I. Neal, Jr.



Richard D. Buck

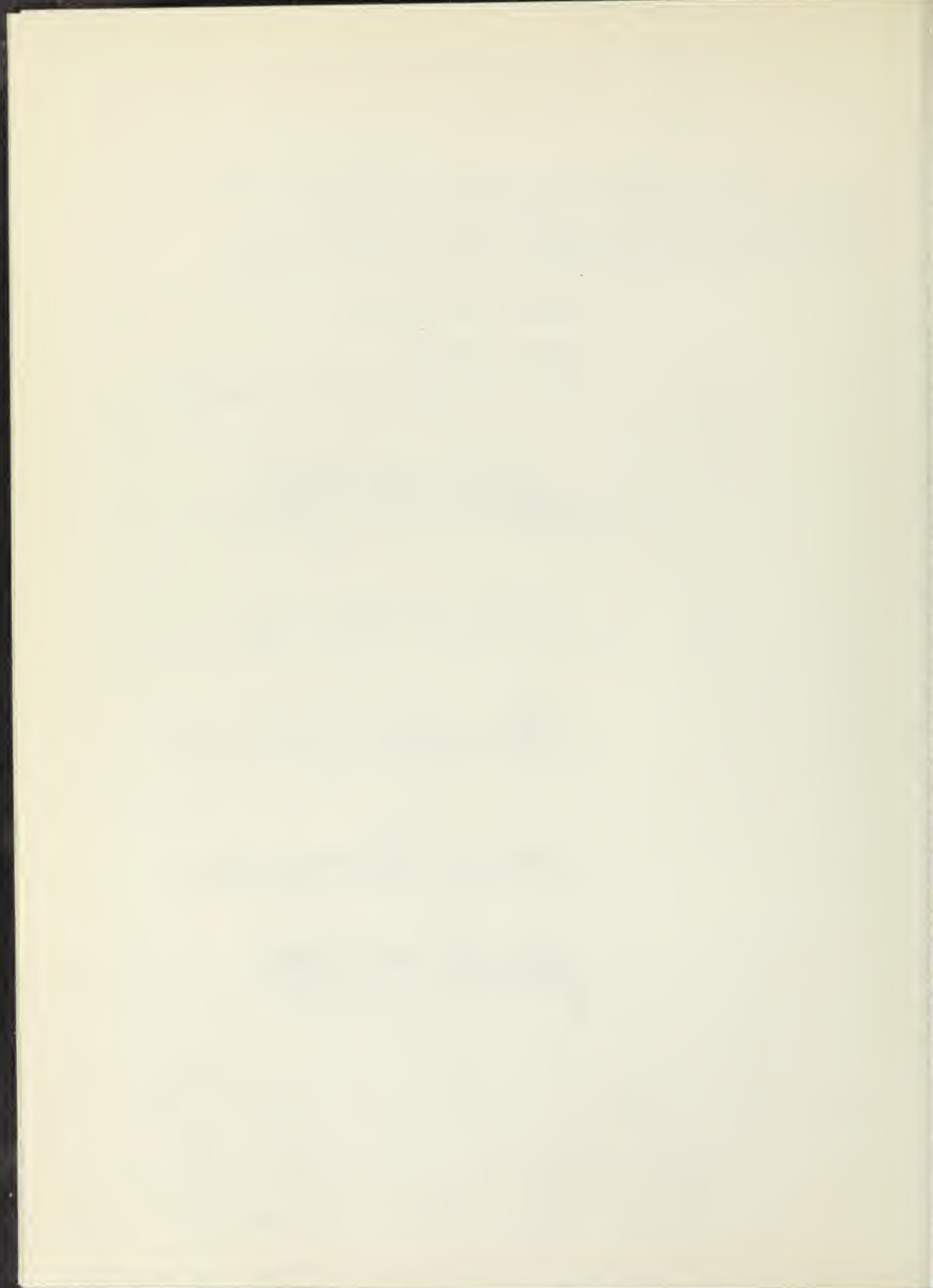


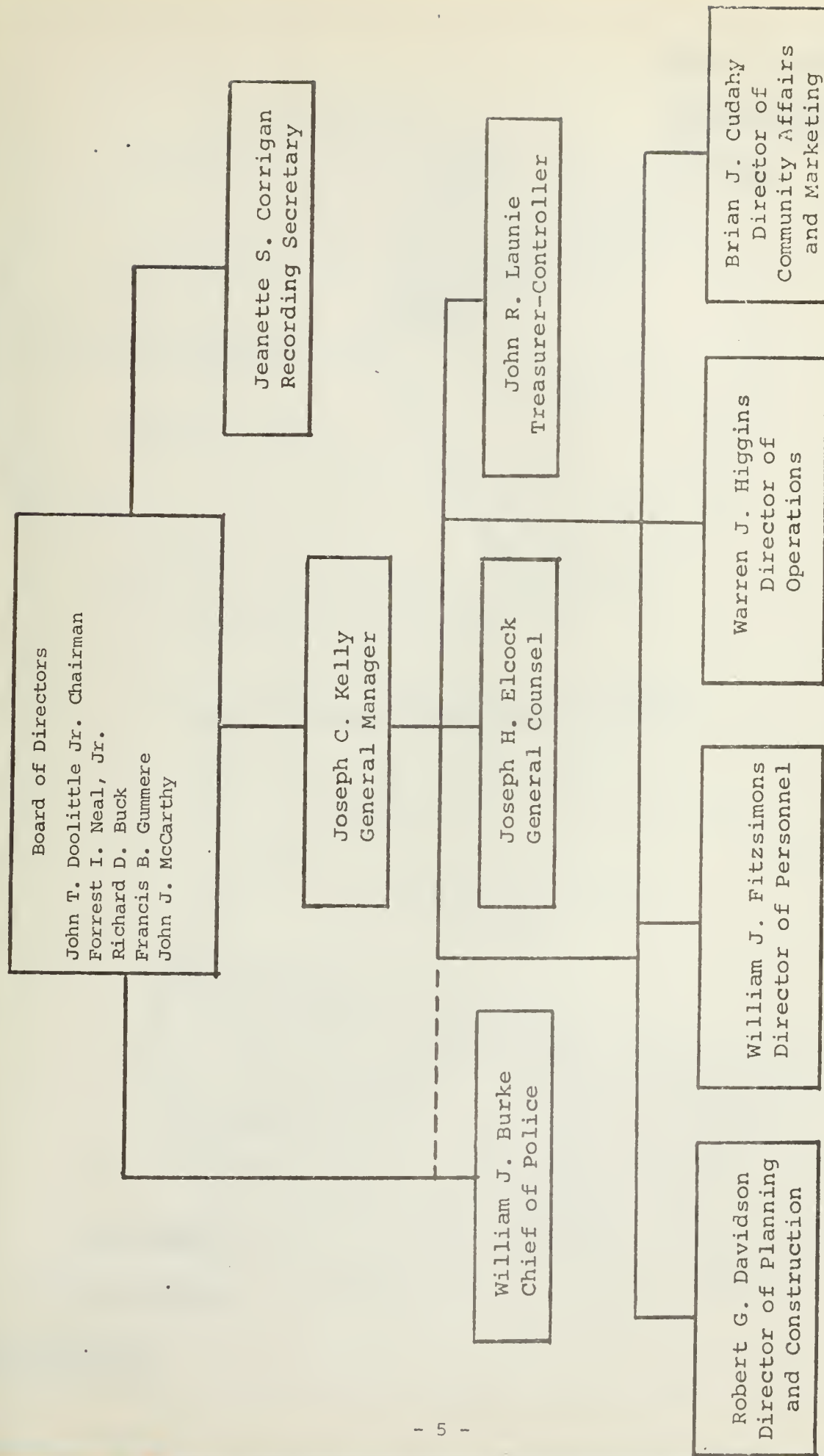
Francis B. Gummere

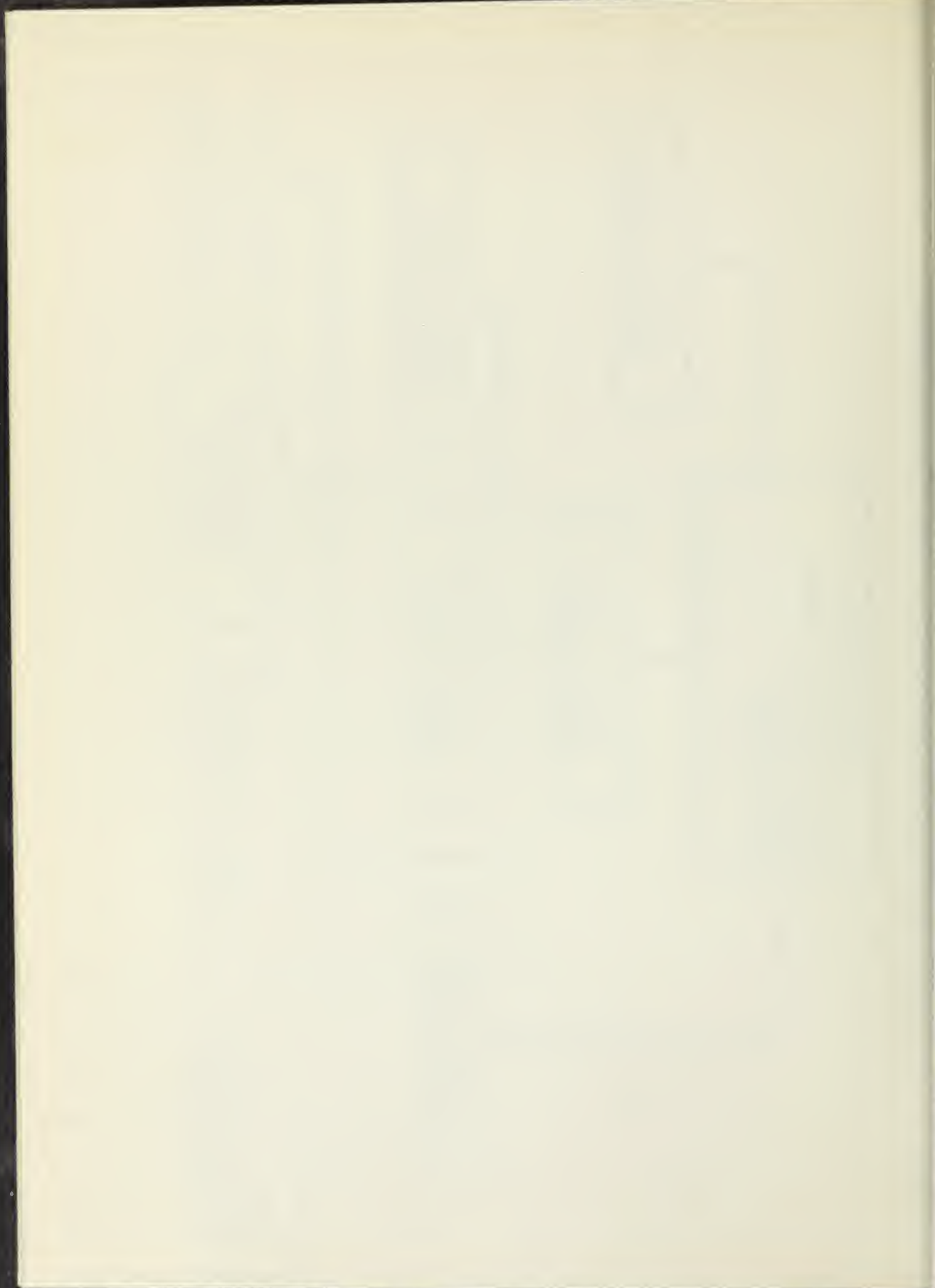


John J. McCarthy

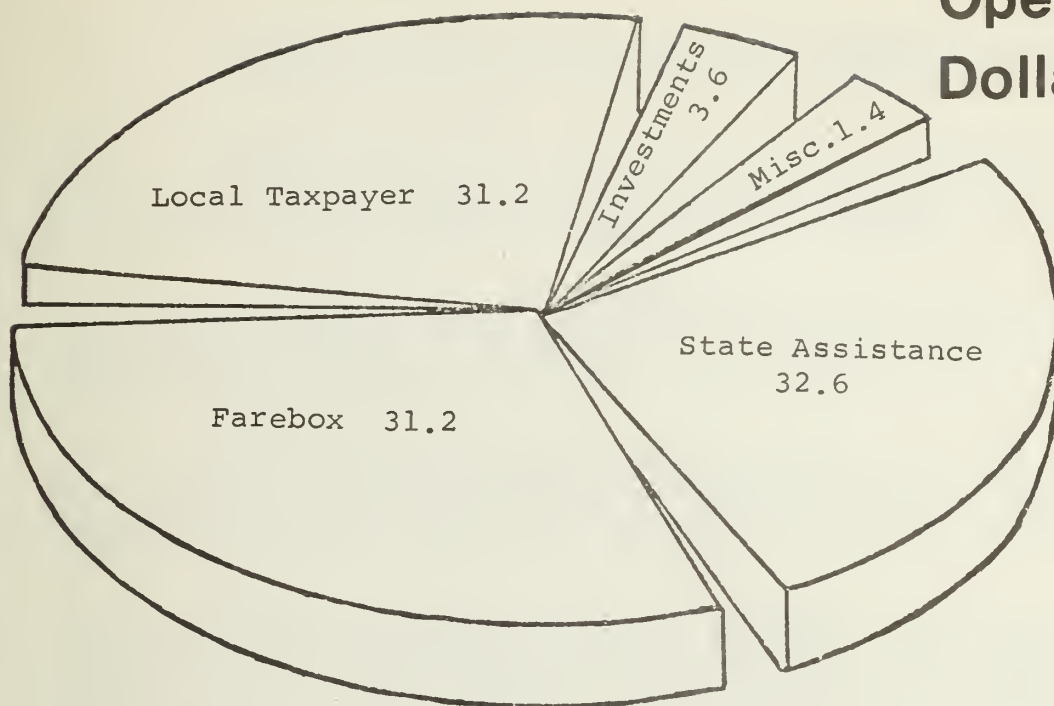
March 29, 1974



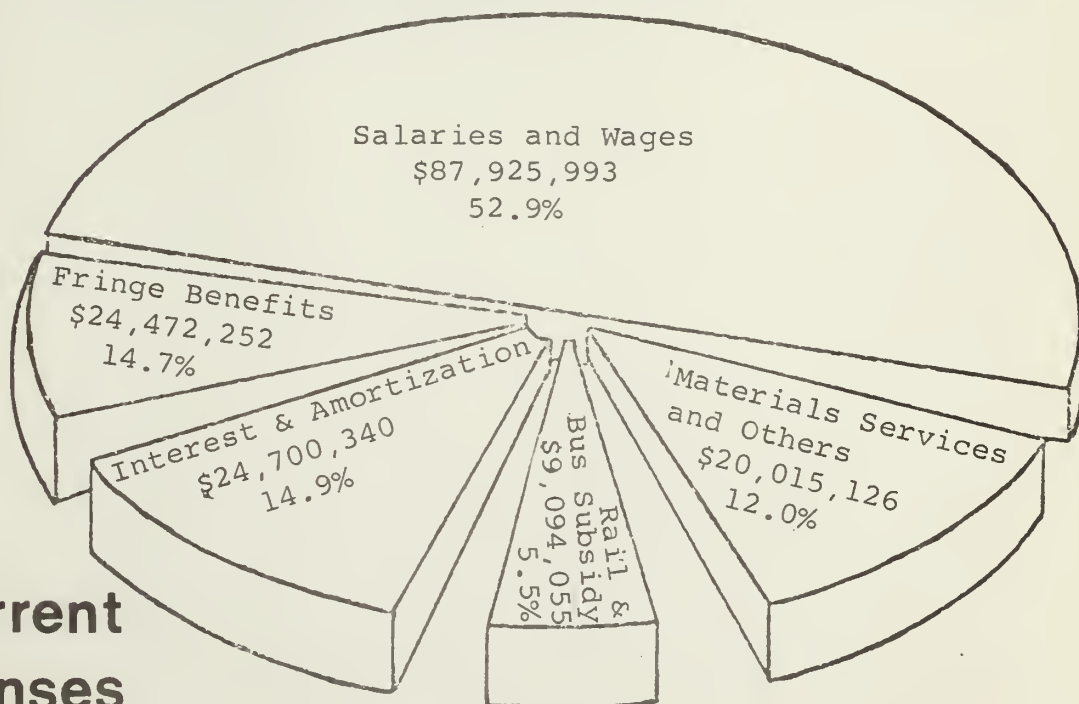




Source of Operating Fund Dollar

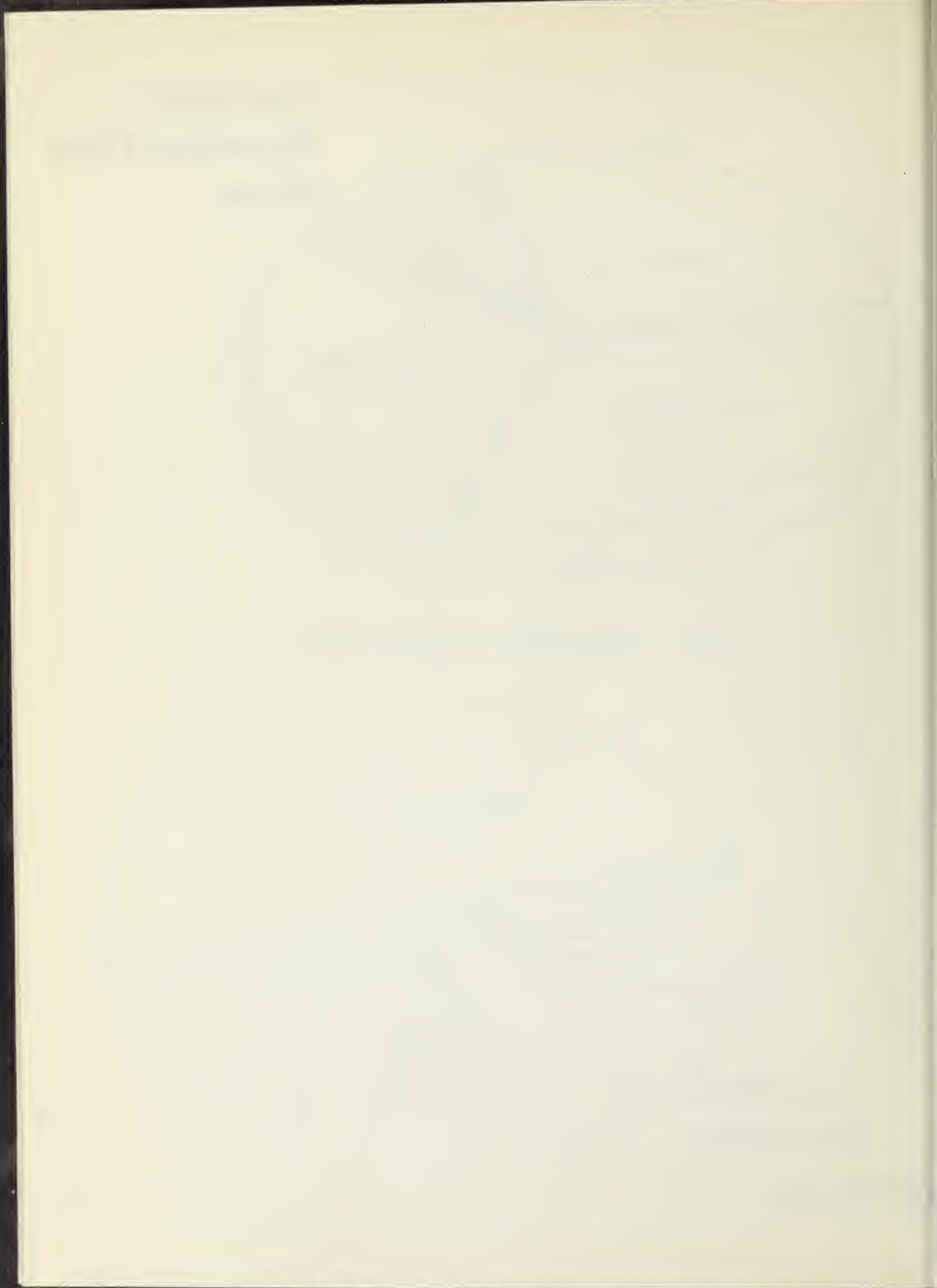


Year Ending December 31, 1973



**Current
Expenses**

\$166,207,766



COMPREHENSIVE PROGRAM FOR MASS TRANSPORTATION

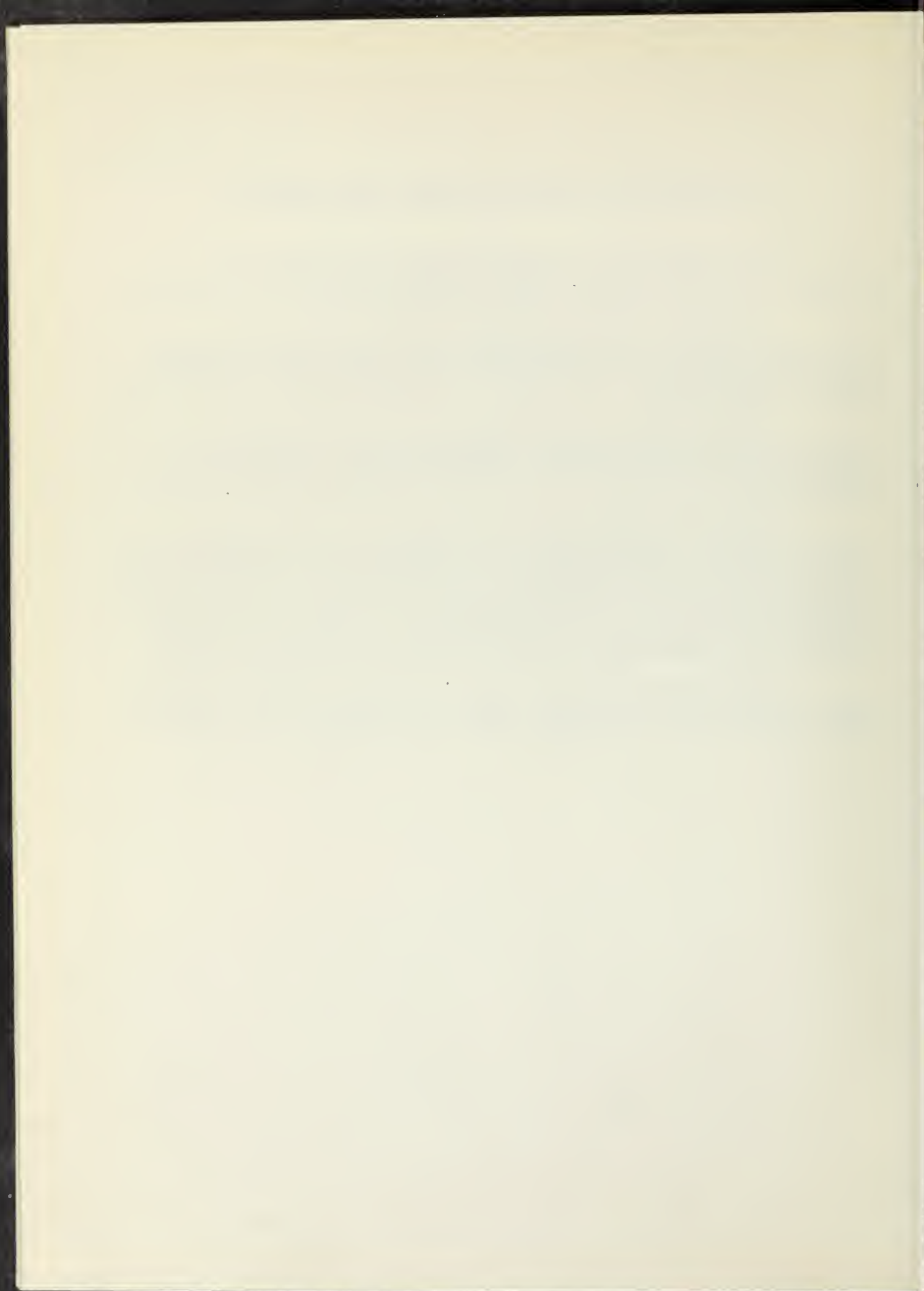
The Authority's Program for Mass Transportation, or Master Plan, which requires Advisory Board approval, was adopted in 1966. It was revised in 1968, 1969 and 1971.

In 1973 a revised program entitled "1973-1977 Transit Development Program" was submitted to the Urban Mass Transportation Administration, Department of Transportation, to meet new federal requirements.

During 1974 a new ten-year (1974-1983) Transit Development Program will be prepared, adapting Governor Francis W. Sargent's recommendations for transit investment to the existing Master Plan.

Under Chapter 161A of the General Laws, the Authority's Program for Mass Transportation is subject to the approval of the Advisory Board. The Program must be prepared by the Authority in consultation with the Metropolitan Area Planning Council and other appropriate agencies of the Commonwealth and Federal Government. It must also be based on the transportation plans and programs adopted by the Department of Public Works of the Commonwealth.

The following charts show the funding status of Master Plan Projects initiated under Chapter 563, Acts of 1964, Chapter 1075, Acts of 1971 and Chapter 1140, Acts of 1973:



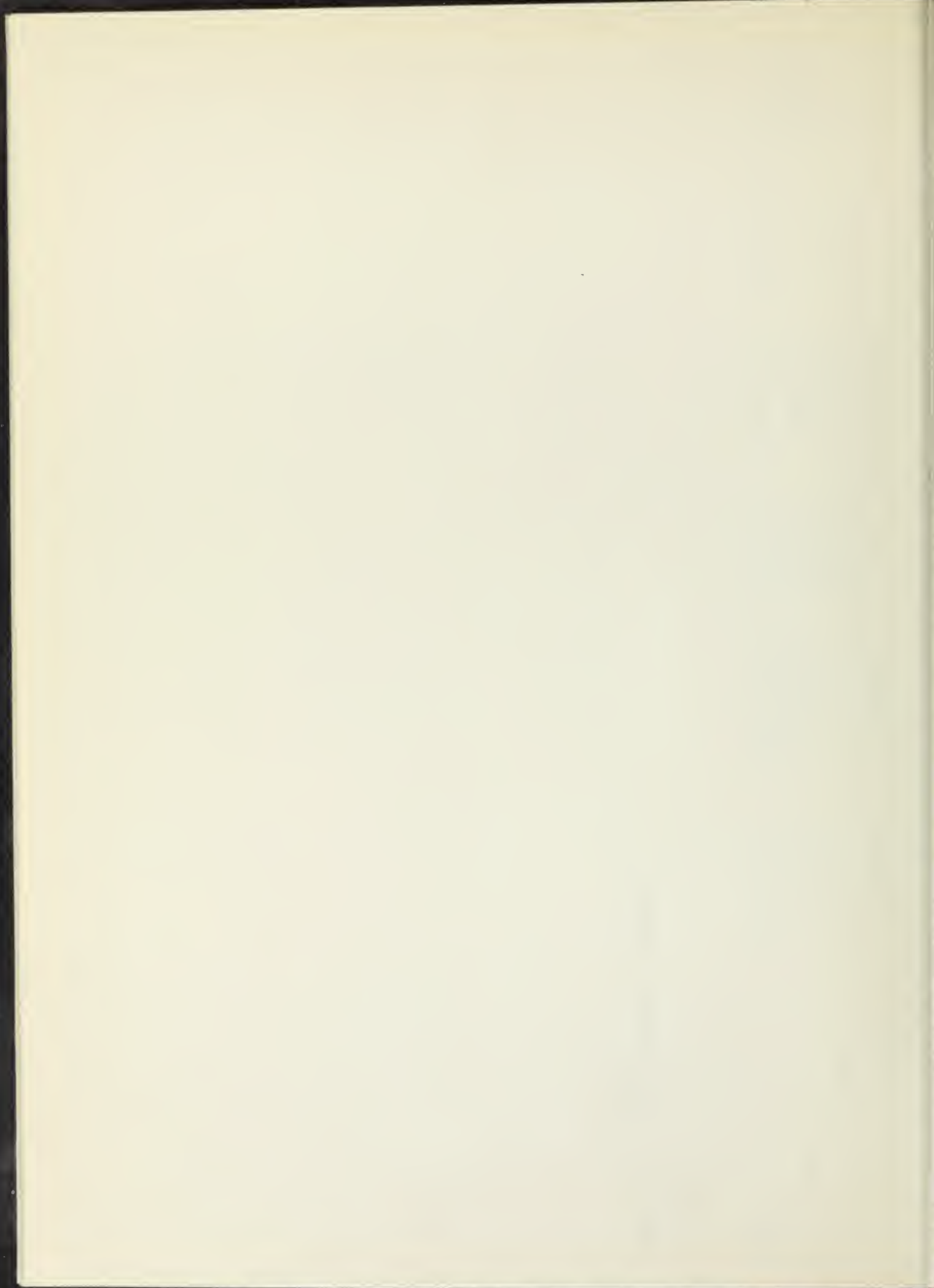
STATE OF CALIFORNIA
 (in thousands of dollars)
 December 31, 1973

	Acts of 1964 Ch. 563	Acts of 1971 Ch. 1075	Acts of 1973 Ch. 1140	Federal Funds	Other Aid	Total
Haymarket-North	\$87,786.2			\$70,335.8	\$12,745.0	\$170,867.0
Haymarket-North Land		\$ 3,000.0		6,000.0		9,000.0
Southwest Corridor	15,111.2			497.8	382.0	15,991.0
South Shore	60,633.8			38,821.6	3,248.0	102,703.4
South Bay Maintenance Center	13,662.5			19,120.0	7,417.5	40,200.0
Station Modernization-I	7,824.8			6,077.3	1,306.9	15,209.0
Station Modernization-II	92.0	4,782.5		9,565.1		14,439.6
Improvements-Existing Plant	4,185.0					4,185.0
Modernization Program	1,500.0			3,000.0		4,500.0
Revenue Equipment	12,619.3			3,136.7		15,756.0
Green Line Improvements	787.0	12,706.7		25,413.3		38,907.0
Plant Improvements-I		786.6		1,573.1		2,359.7
Plant Improvements-II		3,966.5		7,933.1		11,899.6
Safety Improvements		5,300.8		10,601.6		15,902.4
Acquisition-Middlesex & Boston						
Street Railway Company	373.0					373.0
Private Carrier Subsidies	5,000.0					5,000.0
Rolling Stock:						
310 Buses	4,049.7			8,100.3		12,150.0
Light Rail Vehicle Specs.				133.6	29.4	163.0
150 Light Rail Vehicles	111.0	16,400.0		32,800.0		49,311.0
80 Rapid Transit Cars		9,205.3		18,410.6		27,615.9
50 Trackless Trolleys		890.8		1,781.5		2,672.3
Modernization of 228 R.T. Cars		5,427.0		21,707.8*		27,134.8
Rehabilitation Orange Line						
Structure		1,114.2		4,456.9		5,571.1
Transit Development Program		150.0		1,200.0*	150.0	1,500.0
Technical and Engineering						
Studies		75.4		2,215.7	584.0	4,693.0
Non-Revenue Equipment and	1,817.9					
Administration	6,824.0	284.5		568.9		7,677.4
Sub Total	222,377.4	64,090.3		293,450.7	25,862.8	605,781.2



PENDING APPLICATIONS	2,622.6	59,909.7	-	250,129.2	312,661.5
FUTURE APPLICATIONS	-	-	40,000.0	160,000.0	200,000.0
Sub Total	<u>2,622.6</u>	<u>59,909.7</u>	<u>40,000.0</u>	<u>410,129.2</u>	<u>512,661.5</u>
TOTAL	\$225,000.0	\$124,000.0	\$40,000.0	\$703,579.9	\$25,862.8 \$1,118,442.7

* Letter of no prejudice received



INTRODUCTION

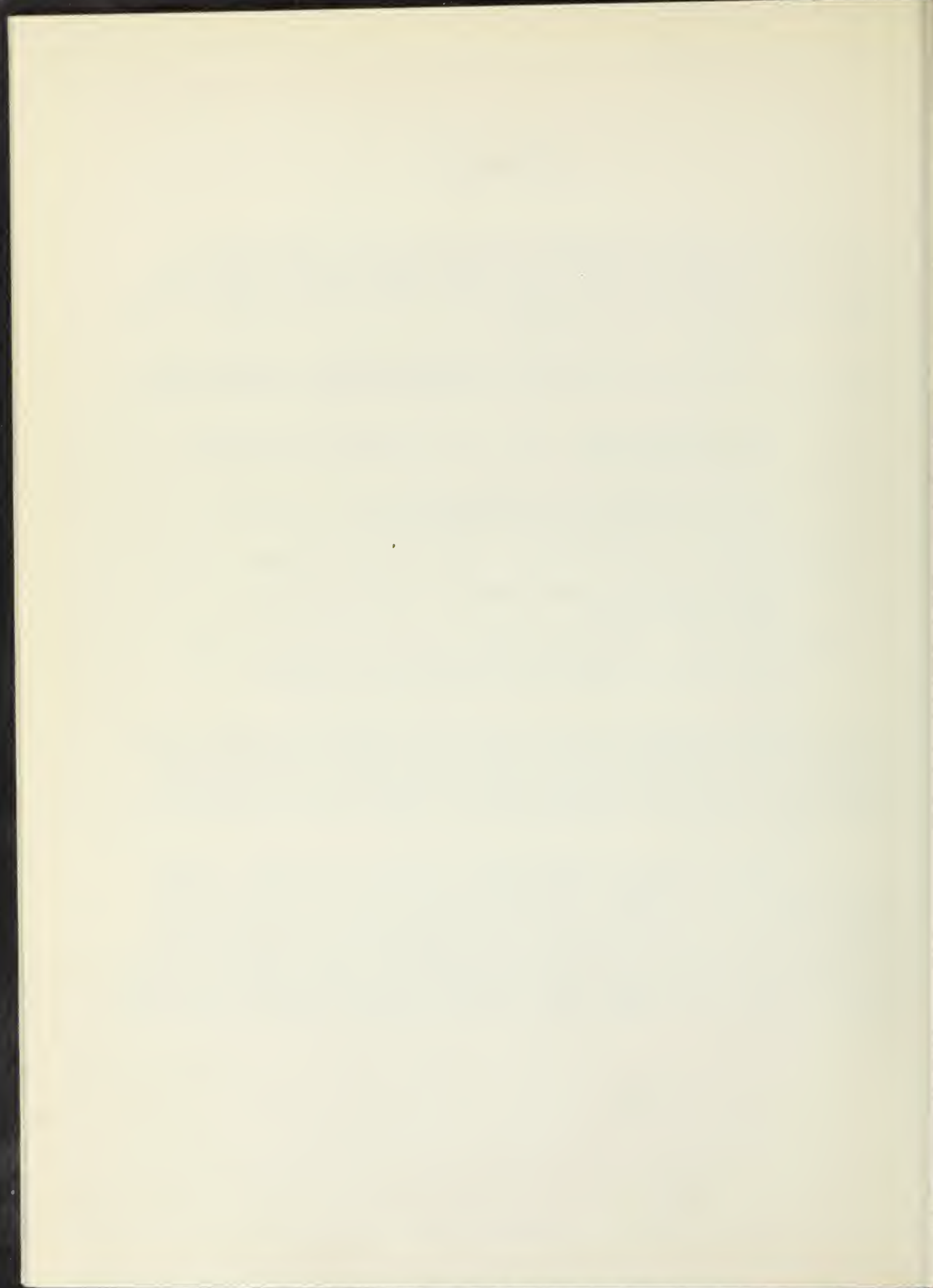
The year 1973 should stand as a major bench mark in the history of transportation in the Boston Metropolitan Area. For it was during this year that major decisions were made that will greatly affect the shape and style of transportation for the remaining quarter of the century.

Consider, for instance, how unthinkable it would have been only a few years ago even to consider some of the following:

- *** the Highway Trust Fund will be opened up for mass transit projects
- *** fifty percent of the MBTA's net cost of service will be assumed by the Commonwealth
- *** fares on rapid transit lines will be lowered
- *** major aerospace manufacturer will be building new trolley cars
- *** plans for proposed highways will be scrapped, and new transit facilities substituted for them

Yet these are just a few of the things that did in fact take place during 1973. Much of the year's progress is not of a sort that is readily apparent during a typical rush hour on the transit system. But it is the kind of thing that will greatly affect the reliability and dependability and frequency of service in the years ahead.

Restoration and renovation of the mass transit system in Boston has not been an easy task, and it is certainly a task that is far from finished. But as we reflect on the accomplishments of 1973, there is reason to be both proud and optimistic. Proud of the fact that much of the groundwork has been completed, and the long patterns of neglect have finally been reversed. And optimistic that the resources are now at hand to continue the task. This, in sum, is the theme that one can clearly detect in the year just completed.



LEGISLATION - 1973

Chapter 1140 of the Acts of 1973 stands out as perhaps the most significant piece of state transportation legislation enacted since the MBTA was established in 1964.

The key feature of this bill is the Commonwealth's assumption of \$35 million in additional obligation of the Authority's net cost of service. It should be pointed out that while this is for one year only, the Act does make provision for future agreements between the Commonwealth and the Authority.

As part of the same legislation, the Authority's capital investment planning function is transferred to the Executive Office of Transportation and Construction. This is necessary to coordinate and prepare mass transportation planning in an integrated and balanced fashion. The change in planning functions will be effective January 1, 1975. The capital investment program was also the beneficiary of an additional \$40 million in bonding authorization, including \$15 million for major commuter rail capital improvements.

Other important features in the bill include:

The Chairman of the Board of Directors becomes the full-time chief executive officer on January 1, 1975.

Salaries of all employees must be submitted to Administration and Finance for review and recommendation annually before January 1.

The budget shall be prepared in consultation with the Secretary of Transportation and the Advisory Board.

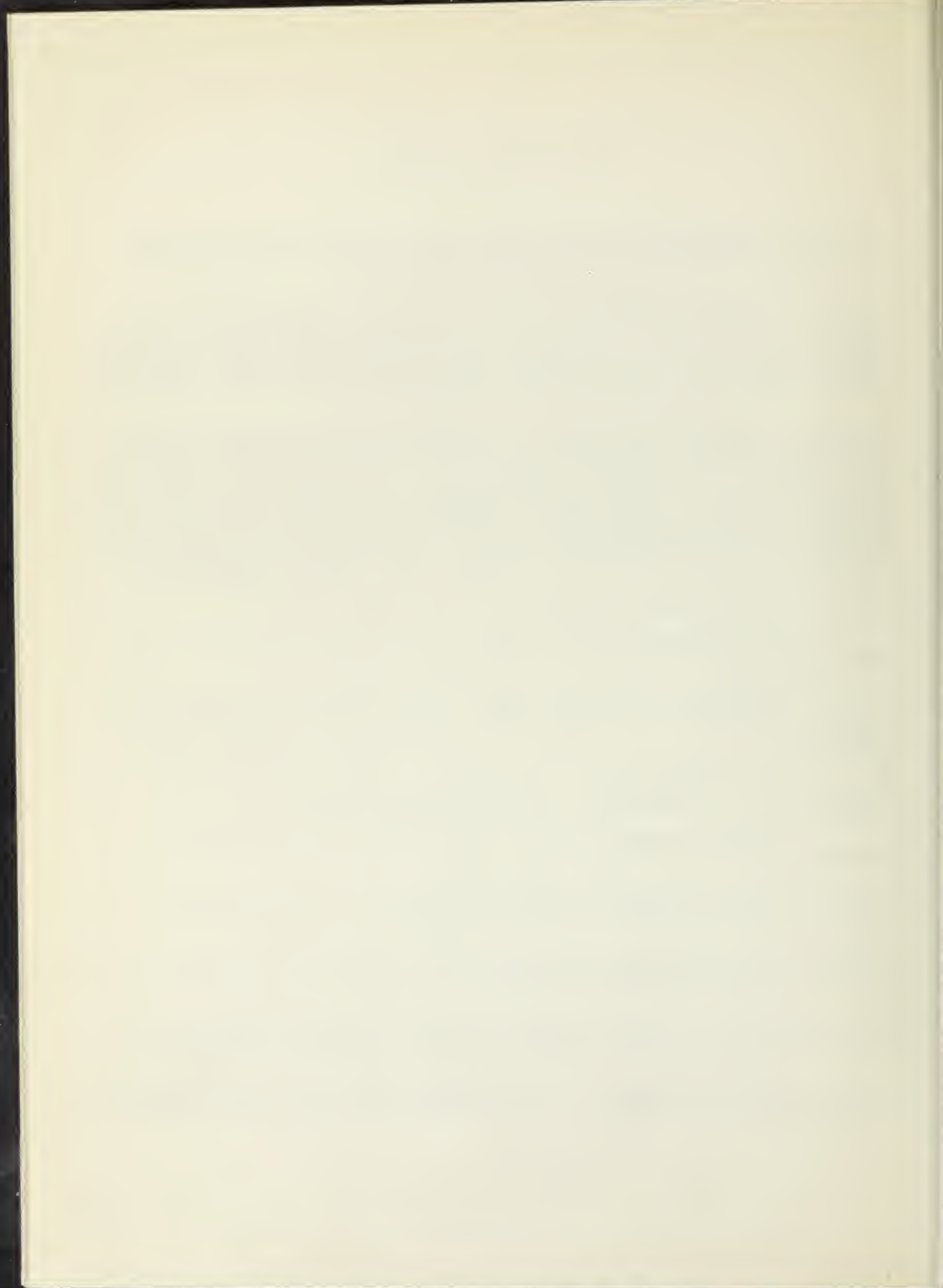
Advisory Board expenses are increased from \$10,000 to \$40,000, allowing for staff to be hired.

Express stations opened after July 1, 1973 shall be exempt from the present "boarding count".

Public agencies may make payroll deductions from employees to pay for transit passes.

Public hearings are provided for groups desiring to participate in the design process of major transportation facilities.

Supplementary state highway assistance in the amount of \$2.5 million is available to certain MBTA cities and towns generally located outside Route 128.

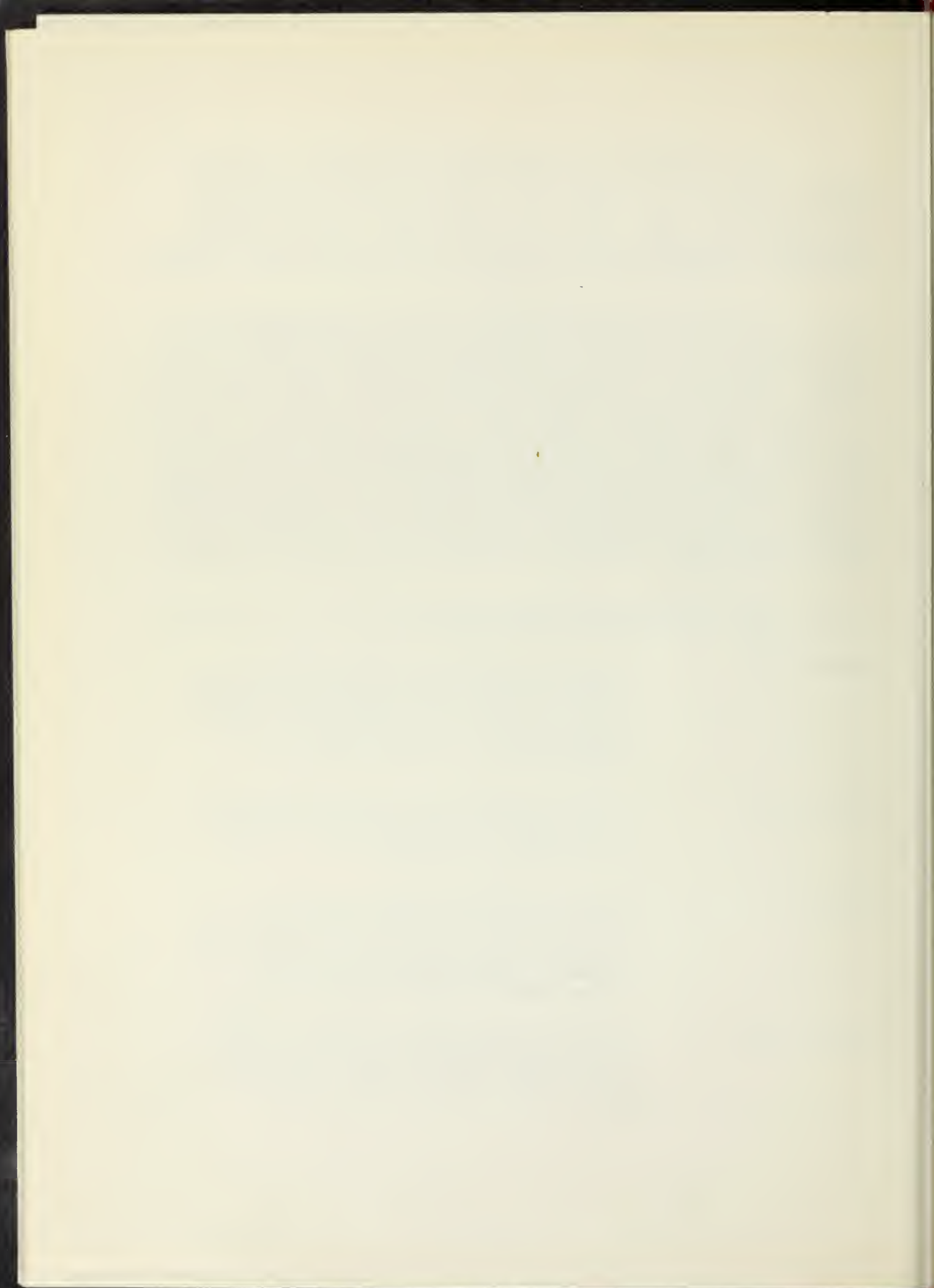


To indicate how comprehensive and how far-reaching Chapter 1140 is, it provides, in addition to MBTA assistance, further assistance to communities outside the MBTA district. This assistance comes from the Highway Fund and new bonding authorization to the amount of \$40 million. The Massachusetts Aeronautics Commission also receives \$2 million bonding authorization for certain airport projects.

In addition to legislation at the state level, 1973 saw the passage of significant new statutes in Washington that will provide major funding for Authority projects over the next decade. While a major priority item -- federal assistance for transit operations -- failed to gain passage in 1973, its margin of defeat was extremely slim, giving reason to believe this may be an idea whose time is about due. On the other hand, 1973 saw the first break in the previously inviolate Highway Trust Fund for transit purposes. And more importantly for Massachusetts, federal legislation was enacted to enable the State to transfer to mass transit construction funds previously earmarked for the building of highways, highways that have now been cancelled as part of the state's policy of placing heavier stress on public transit facilities.

The following additional State Chapters were enacted in 1973 and directly affect the Authority:

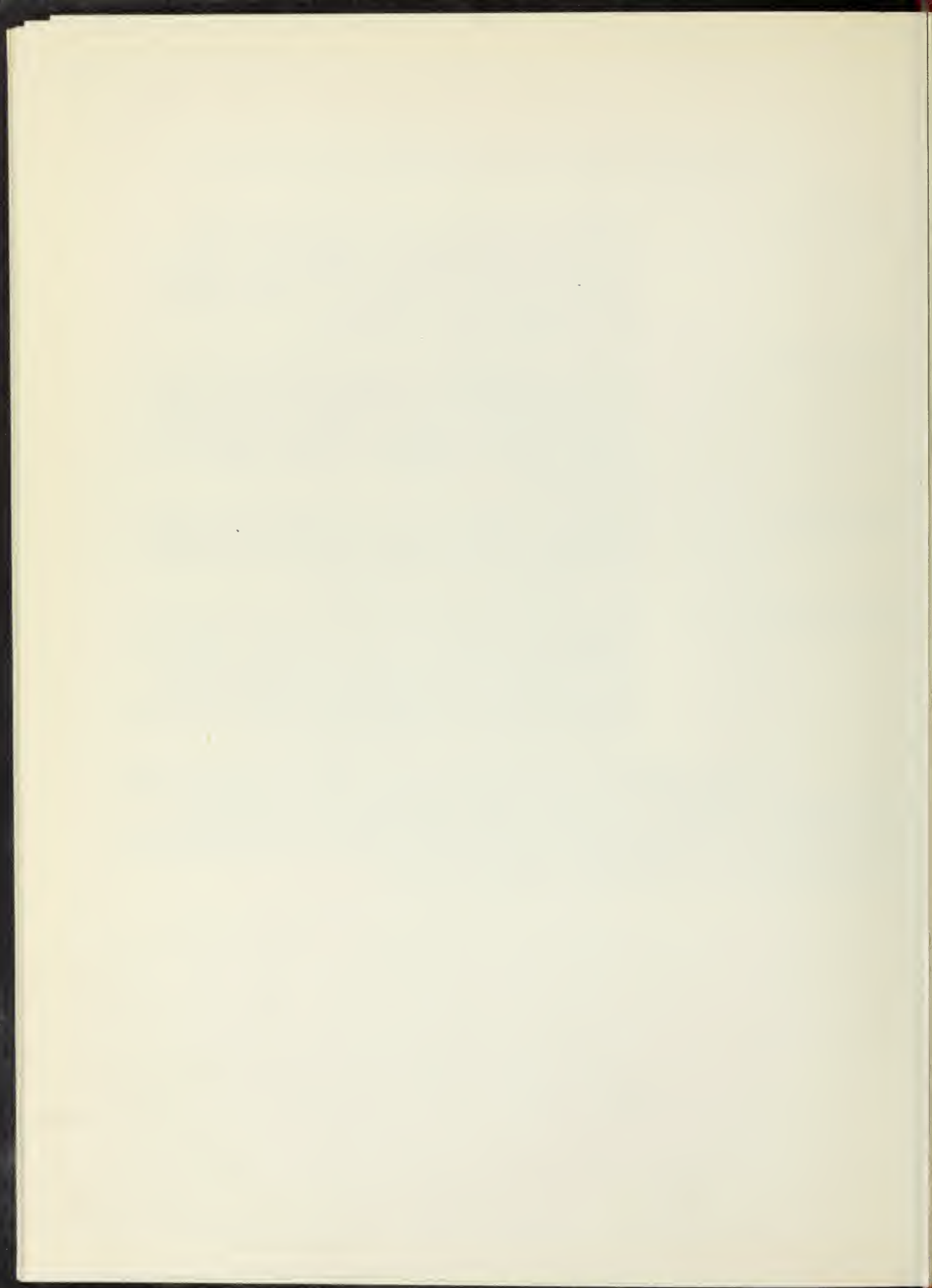
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|--------------|---|---|
| Chapter 857 | - | An Act providing for the payment to persons nominated as beneficiaries by the deceased or to the spouse of next of kin of deceased employees by the Massachusetts Bay Transportation Authority. |
| Chapter 1029 | - | An Act authorizing the Massachusetts Bay Transportation Authority to sell and convey a certain parcel of land to the City of Malden. |
| Chapter 1077 | - | An Act relative to the method of computing the retirement rights of certain employees of the Massachusetts Bay Transportation Authority who were formerly employed by the Eastern Massachusetts Street Railway Company. |
| Chapter 1159 | - | An Act authorizing the Massachusetts Bay Transportation Authority to sell and convey certain land to the Park Department of the City of Boston. |



The following Resolves were signed by the Governor in 1973:

- Chapter 12 - Resolve providing for an investigation and study by a special commission relative to the feasibility of extending and expanding public transportation from Boston to the Wilmington area by the Massachusetts Bay Transportation Authority.
- Chapter 107 - Resolve providing for an investigation and study by a special commission relative to the feasibility of providing free commuter transportation for the general public in those parts or sections of the Commonwealth where it may be deemed necessary and advisable.
- Chapter 121 - Resolve providing for an investigation and study by a special commission relative to the cause of the fires in the Massachusetts Bay Transportation Authority.
- Chapter 134 - Resolve increasing the scope of the special commission established to make an investigation and study relative to the feasibility of providing free commuter transportation for the general public in those parts or sections of the Commonwealth where it may be deemed necessary and advisable.

In all, however, the key feature of this 1973 state legislation was enactment of the new funding provisions of Chapter 1140. This signals the start of a new cooperative policy between the Commonwealth and the cities and towns that comprise the Authority's Advisory Board, a policy that will insure a bright future for mass transportation in the months and years ahead.



1974 Bills

The following is a list of bills filed by the Authority for consideration by the Legislature during the 1974 session:

- An Act relative to the liability of the Massachusetts Bay Transportation Authority for certain acts and negligence.

(This is a repeat of a bill filed last session. Since the inception of no-fault insurance, passengers injured on buses registered as motor vehicles are compensated differently from passengers on other rolling stock. This bill would insure all passengers equal treatment.)

- An Act relative to obtaining a surety bond by the Massachusetts Bay Transportation Authority as required under the Workmen's Compensation Act.

(This bill would clarify certain provisions under Workmen's Compensation Act regarding the filing of a surety bond by the Authority.)

- An Act authorizing the Massachusetts Bay Transportation Authority to make entry on private land for purpose of surveys, soundings and drillings.

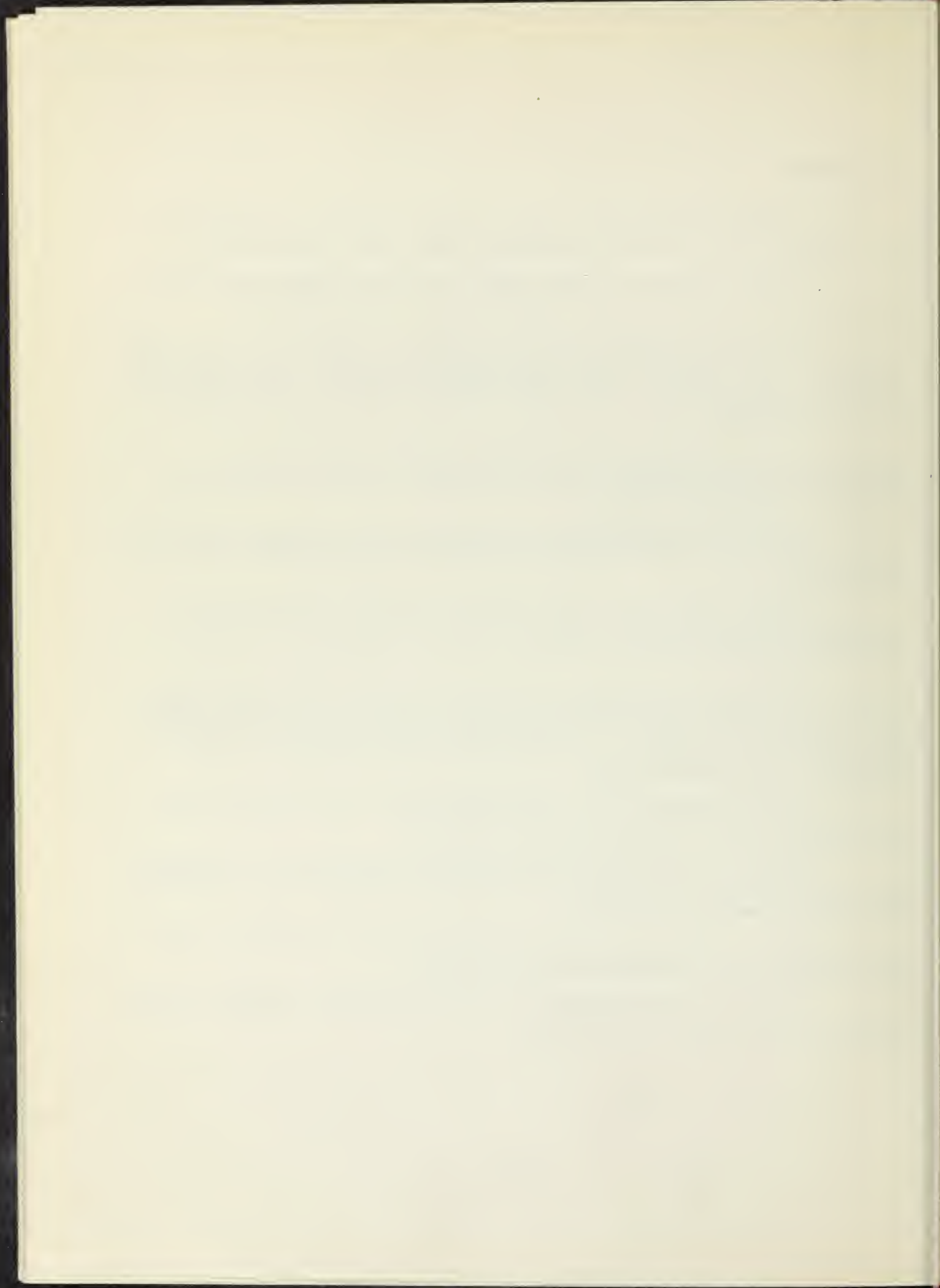
(This bill would allow the Authority to enter on private property to make certain tests prior to a taking for transportation and construction purposes. It provides reimbursement to property owners for any damage. A similar statute now pertains to the Department of Public Works.)

- An Act providing for increased police protection for the Massachusetts Bay Transportation Authority.

(This bill would allow the Board of Directors to contract for increased police protection in order to augment the Authority's force when deemed necessary.)

- An Act relative to the organization and financing of the Massachusetts Bay Transportation Authority.

(This is a continuation of state assistance received under Chapter 1140 of the Acts of 1973.)



- An Act relative to the regulation and control of the Massachusetts Bay Transportation Authority's Police Department.

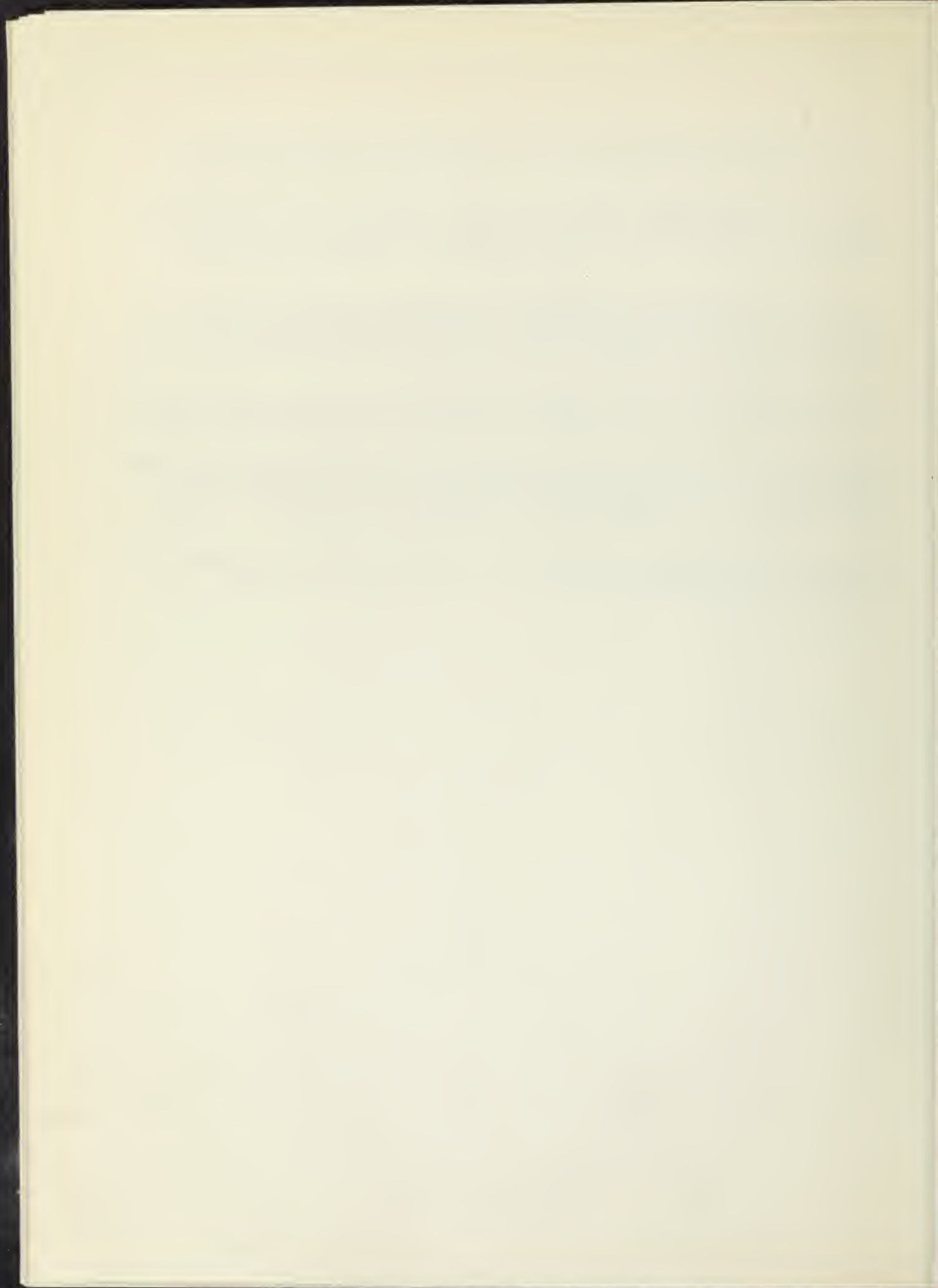
(This proposal would give the Board of Directors the authority to make rules and regulations regarding the department and would give the Chief the authority to specify duties and hours.)

- An Act repealing Chapter six hundred and twenty-eight of the Acts of nineteen hundred and sixty-six prohibiting the Massachusetts Bay Transportation Authority from disposing of or selling its power plants.

(This bill would repeal Chapter 628 of 1966 which requires the Authority to maintain and operate its own power facilities.)

- An Act authorizing and directing the Metropolitan District Commission to convey certain parcels of land in Malden to the Massachusetts Bay Transportation Authority and to grant a temporary easement in another parcel of land in said city.

(This proposal gives further authorization to the M.D.C. to convey certain land in Malden to the Authority for the Haymarket-North Extension.)



TRANSIT DEVELOPMENT PROGRAM 1974-1983

The MBTA's currently funded capital program calls for a total investment of \$605 million. The source of funds for this program is 49% Federal Government, 47% local bonding, and 4% from miscellaneous other sources, such as BRA, HUD funds, local jurisdiction contributions, and funds realized from the sale of properties. Since 1965, the Authority has received \$294 million in federal grant and loan assistance from the Urban Mass Transportation Administration to match \$135 million in local money. This constitutes a program totaling \$429 million. In addition, the Authority has executed additional programs of approximately \$176 million.

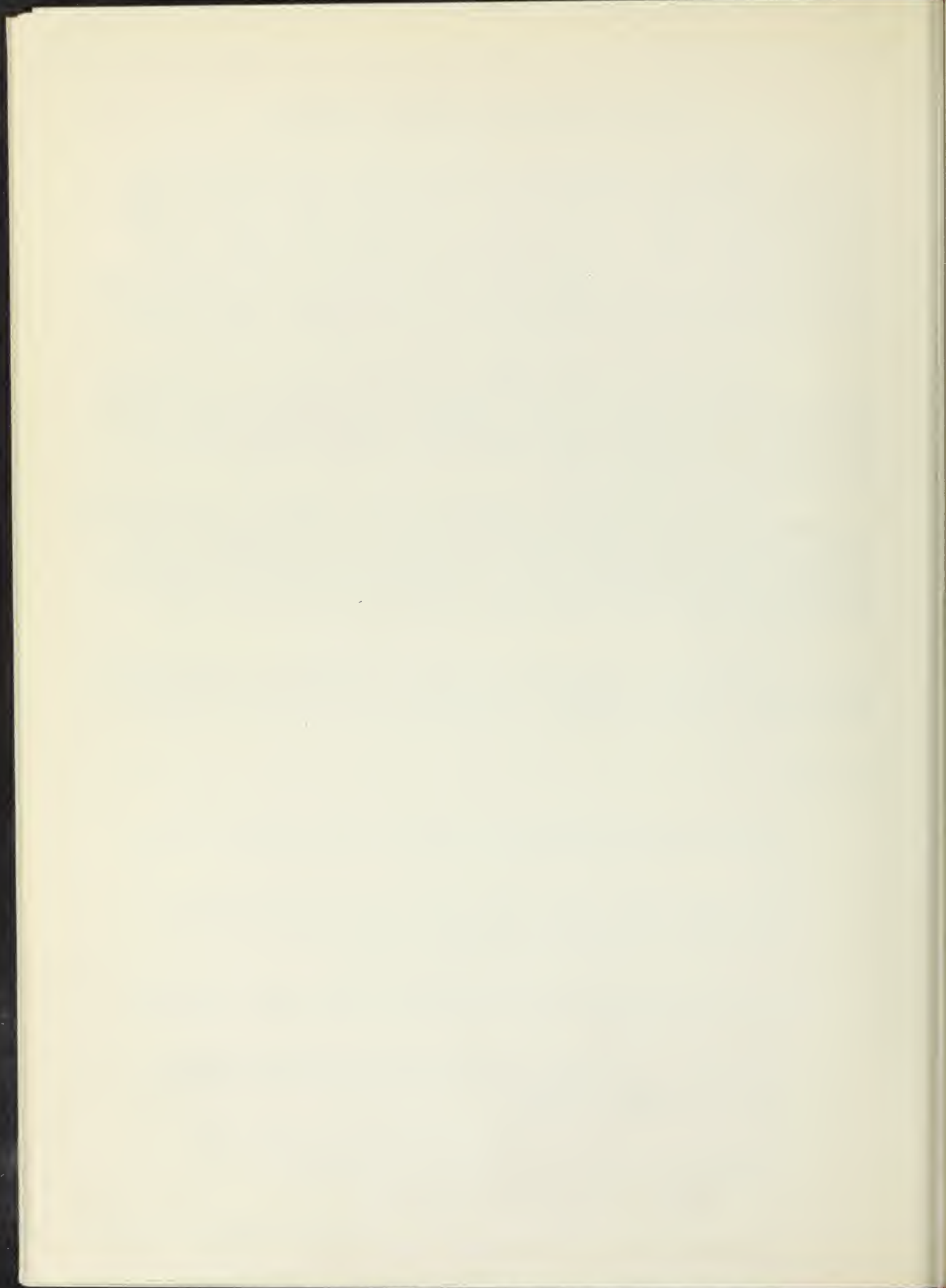
As a result of the MBTA's successful pursuit of available funds, Boston is rated fourth in the nation after the larger metropolitan areas of New York City, Chicago and San Francisco for total dollars in federal assistance received. No other city, however, has received as large a percentage of its capital program financed by federal aid as has Boston.

Beyond the program presently funded, however, the Authority contemplates an even larger program of mass transit construction. Funds once earmarked for Interstate Highways have suddenly become available for mass transit, and it seems perfectly safe to say that the next decade should see more new construction of mass transit facilities than in any comparable period in the history of the metropolitan area.

During 1974 the MBTA will unveil a ten-year billion dollar capital program for expansion of transit facilities in the Greater Boston Area. Eighty percent of this ambitious program is expected to be financed by the Federal Government.

Some of the major programs scheduled for the next decade include:

- a Red Line Northwest Extension beyond Harvard will be constructed as a deep bore tunnel with stations at Porter Square, Cambridge, and Davis Square, Somerville
- the Orange Line from South Cove to Forest Hills will be depressed below grade level instead of being placed on the existing railroad embankment; the line will also be extended through West Roxbury to Needham
- a continuing program will be maintained to modernize the existing transit system, including fixed plant, stations and rolling stock
- extension of the Red Line from Quincy Center to South Braintree and subsequently to Holbrook or South Weymouth will be pressed forward
- electrification of the Eastern Route rail line from Wonderland to Lynn as a Blue Line Extension
- new circumferential transit services
- electrification of the Reading Line as an extension of the Orange Line



COMMUTER RAILROADS

The two commuter rail lines operating out of Boston are the forgotten step-children in the area's transportation network. The year 1973 marked the beginning of a concentrated program of new interest in these services.

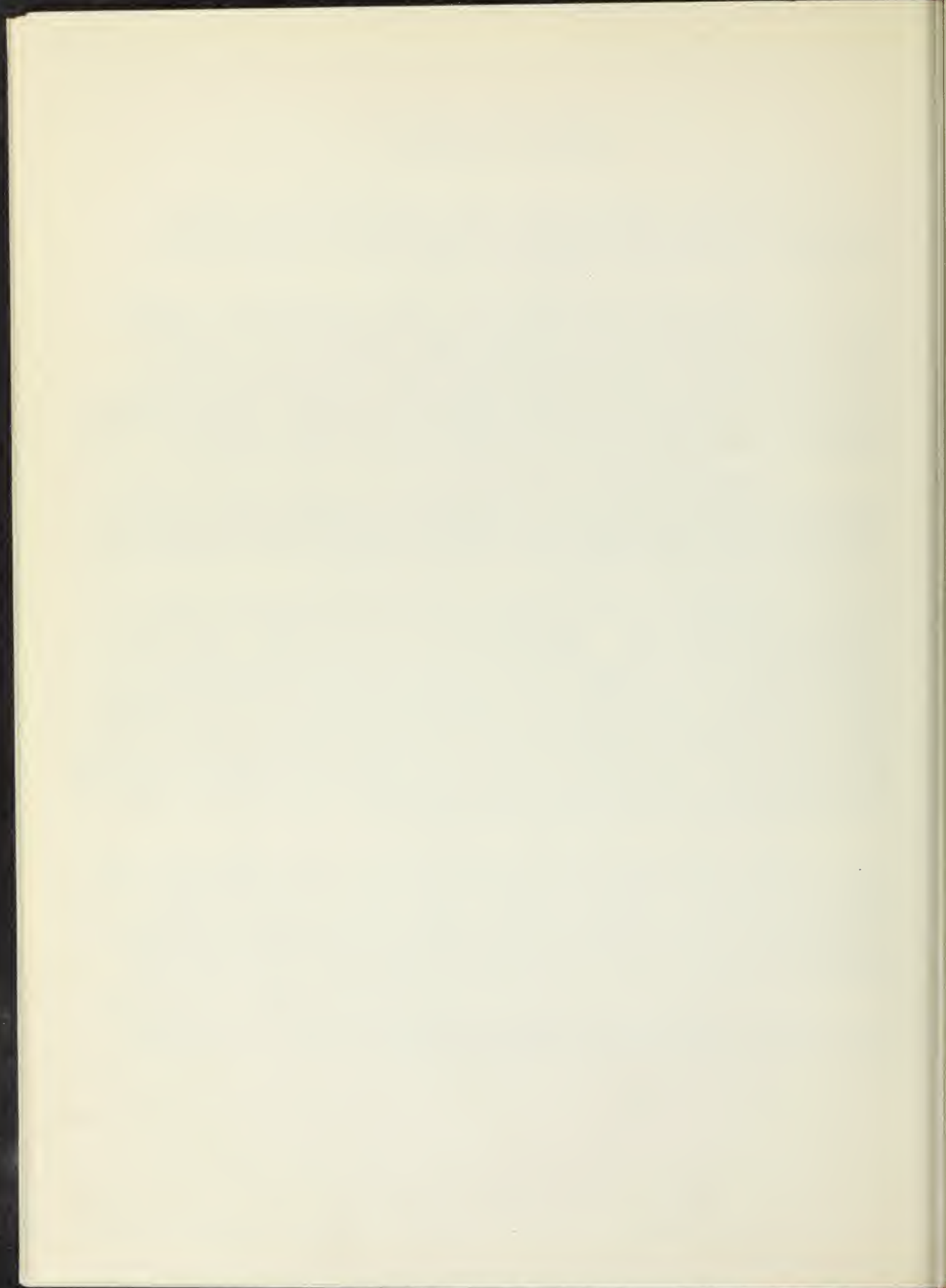
The lines of the Boston and Maine and the Penn Central Railroads carry some 16,000 daily commuters into Boston. Since 1964 the MBTA has been subsidizing these services on a year-by-year basis. Since the passenger capacity of the rail corridors is considerably in excess of present usage --(unfortunately it is not now in excess of present peak-hour equipment availability!)-- additional utilization for the commuter rail system can become a key element in achieving a truly balanced transportation network.

Effective as the subsidy program has been in preserving essential service in the rail corridors and "buying time" for the development and financing of an overall transportation program, it has only been a short-term plan which has been severely hampered by the serious financial plight of the two railroads.

During 1973, the Authority formally adopted the "Dyer Report", a December 1972 consultant plan for acquisition and use of railroad rights-of-way. Implementation of this report, plus the Commuter Rail Improvement Program (CRIP Report), combined with the availability of new funding sources, will permit the Authority to achieve a total integration and improvement program for all commuter rail services. The Authority proposes to invest over the next ten years in a program consisting of an overhead catenary system for the rail lines which will supply power to transit cars using the railroad rights-of-way. Conventional third rail transit cars will be equipped with pantographs to make them compatible both with existing subway lines and the upgraded commuter rail system.

The time necessary for construction of "minimum cost" overhead catenary extensions for a major portion of the present railroad commuter network is estimated to be from seven to twelve years. During the interim period, commuter rail service will be continued and an upgrading program implemented to maintain satisfactory railroad commuter service. This will include right-of-way improvement and equipment acquisition to increase the capacity of the rail lines.

In addition, the Authority voted during 1973 to establish the position of Director of Commuter Rail Services. It is hoped this position will be filled early in 1974.

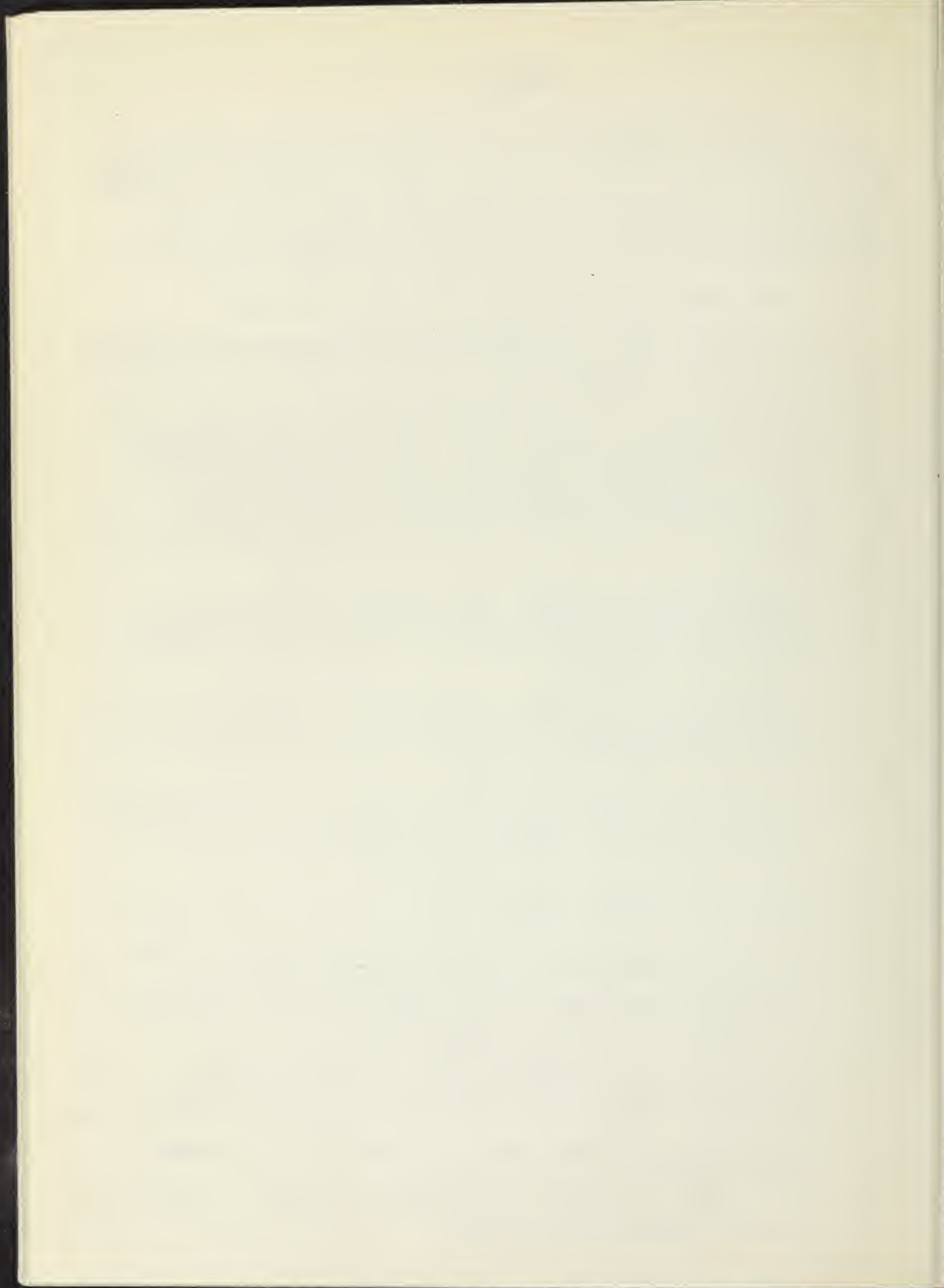


SAFETY

In the aftermath of the two major fires early in 1973, the MBTA undertook immediate steps to accelerate an already existing safety program. The Authority filed for an Urban Mass Transportation Administration grant of \$10,601,640 so safety improvements could be press forward. UMTA approval was granted on June 18. The completion of this program will not only improve the reliability of normal transit service but will also act to increase safety for the general public during any conditions of an emergency nature.

The safety projects completed or begun include:

- Installation of an independent A.C. lighting system throughout the subway. This will preclude the possibility of lighting failure during emergencies.
- Installation of new ventilation throughout the subway - and rehabilitation of older units - with A. C. power supplied from independent sources. This will allow continued operation of ventilation equipment during any emergency that might disrupt the Authority's regular electrical power. Also included in this work are modifications to street gratings over vent shafts permitting emergency entrance and exit.
- Installation of a complete public address system in all downtown subway stations. This network will be centrally controlled from the Authority's Dewey Square Control Center and will permit prompt notification to passengers during delays and emergencies.
- Installation of a complete communications system on the Blue Line including four base stations, cables, antennae, a public address system, and a train indication system between Maverick and Aquarium Stations.
- Construction of dry standpipes in critical tunnel locations. The system has been designed with connections at street level to enable the Fire Department to pump water directly into subway tunnels during fire emergencies.
- Purchase of vacuum equipment which has been mounted on work trains for cleaning subways.
- Modernization of the MBTA's transportation/operations radio network, including replacement of obsolete equipment.
- Installation of a public address system on the Orange Line between Dover and Forest Hills Stations.
- Installation of an emergency exit at Bowdoin Station.
- Installation of fire alarm systems at the Everett Yards and Shops.
- Acquisition of 24 mobile radios for maintenance and supervisory vehicles.
- Installation of special fire protection equipment in relay rooms and signal control rooms.



- HIGHLIGHTS OF THE YEAR 1973 -

Rolling Stock Improvements

- A contract was awarded with the Boeing Vertol Co. for the manufacture of 150 Light Rail Vehicles for the Green Line.

- A "letter of no prejudice" was received from the Urban Mass Transportation Administration authorizing the Authority to proceed with Phase I, Engineering Services, of its Rapid Transit Car Modernization Program. This project has a total cost of \$27,134,780 and includes the modernization of the following rolling stock:

100 Orange Line Cars	built in 1956/57
37 Blue Line Cars	built in 1950
91 Red Line Cars	built in 1962

- The East Boston Blue Line Refurbishment Program affecting 38 cars was completed.

New Facilities Progress

- Reconstruction of roadbed and installation of all-welded rail between Newton Highlands and Riverside Station on the Highland Branch was completed.

- A contract was awarded for architectural and engineering services to adapt the award winning North Quincy Station design to the Oak Grove Station-Winter Street Bridge Complex on the Haymarket-North Extension.

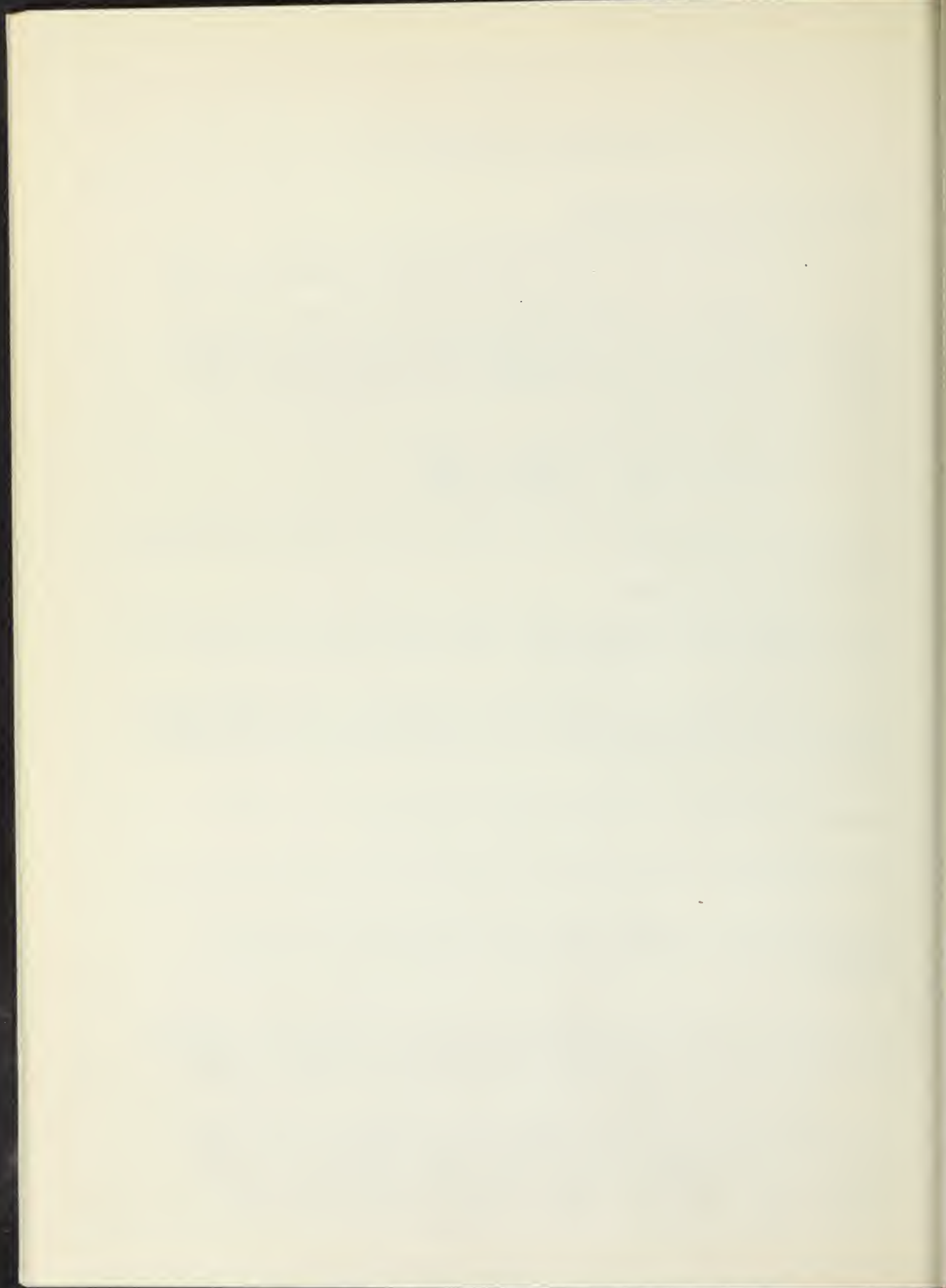
- A contract was awarded for construction of bus and parking facilities at the Wellington Complex.

- Reconstruction of Beacon Street trolley track from Coolidge Corner to the portal at St. Mary's Street was completed.

- Third rail heaters were installed on the inclines of the West Boston Bridge, Savin Hill Bridge and the George L. Anderson Bridge with remote control from the Dewey Operations Center.

- A design and engineering services contract was awarded in connection with the proposed conversion of Watertown Carhouse to a trackless trolley facility which will accommodate repair and maintenance of the Authority's trackless trolley fleet.

- The Haymarket-North Extension's Mystic River Bridge was dedicated in honor of former General Manager Edward Dana, and ground was broken for the Wellington Station. The four-track, 11 span bridge linking Somerville and Medford on the Orange Line is 965 feet long exclusive of approaches, and 64 feet wide.



- Public Address Systems have been installed at 26 rapid transit stations. Upon completion, all will be remotely controlled from the Dewey Operations Center.

- A contract was awarded for the installation of third rail on the 5.6 mile Haymarket-North Extension and for making electrical connections to the existing Orange Line near Haymarket Station and to the new Wellington Maintenance and Repair facility.

- A contract was awarded for furnishing and installing rapid transit track at the storage yard at Wellington.

- A contract was awarded for the construction of a 200 bus service and repair garage at the South Bay Maintenance Center.

- In cooperation with the Urban Mass Transportation Administration and the Department of Transportation, a solar energy emergency lighting system was developed by the MBTA and introduced on Orange Line car 01166.

- A contract was awarded for installation of wayside signals and communication system for the Haymarket-North Extension.

- Structural repairs to the Orange Line elevated structure from the South Portal to the Forest Hills Repair Shop began.

- A contract was awarded for final design of power and communication improvements to the Green Line.

- An engineering analysis was begun for the modernization of the Everett Shops.

- Construction was completed on the Lotus Place bus washer, a new disposal system at Tewksbury Garage, and the modernization of Wood Island Station.

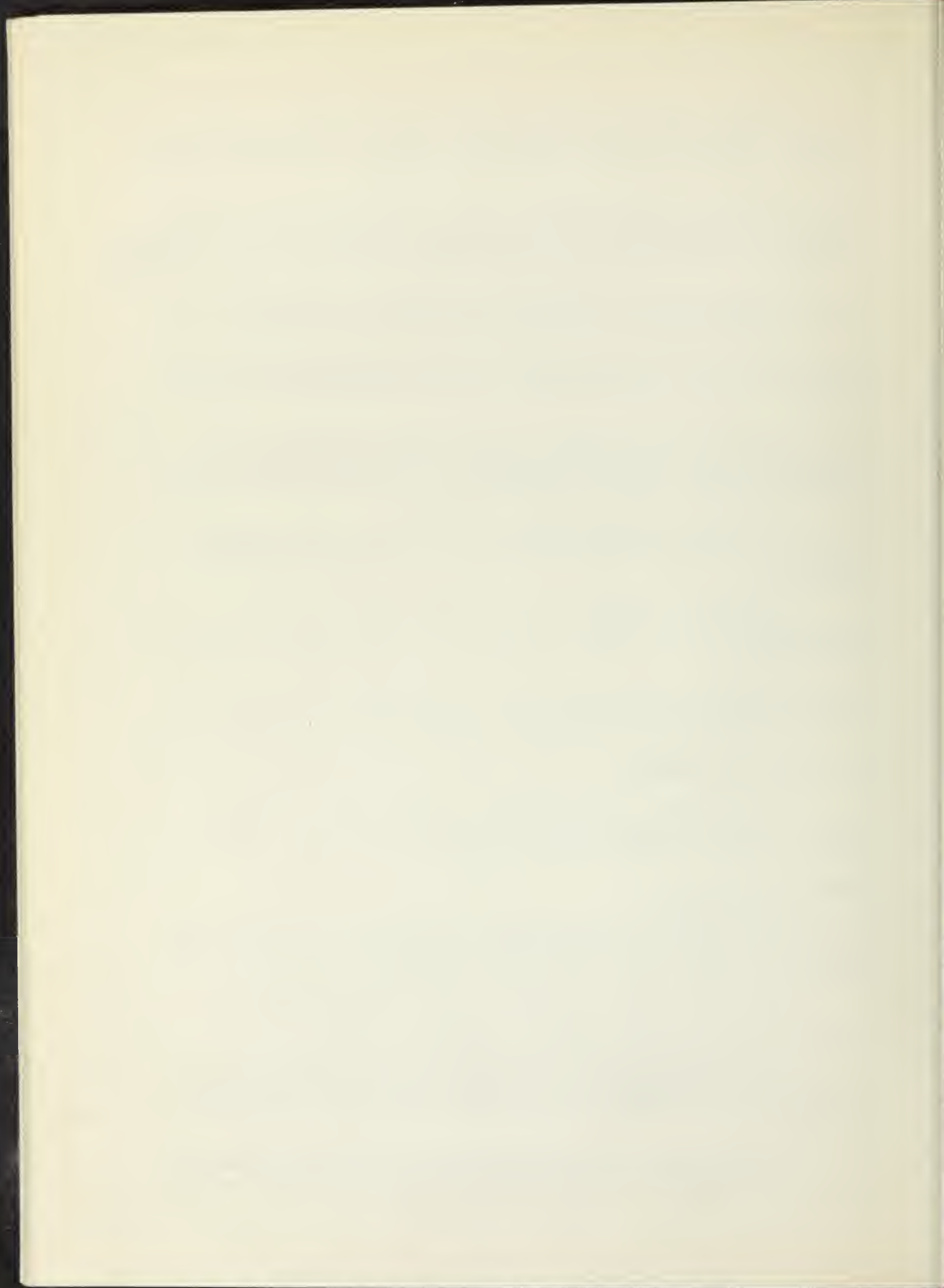
Safety Improvements

- The Authority implemented a \$15,902,460 Safety Improvements Program to upgrade the transportation system and assure passenger safety during any emergency situation.

- New signs were installed at all emergency exit locations in the subway, both at track and street level.

- Dry standpipes were installed at South Station, Washington Street Station, Broadway, Maverick, Aquarium and the Gillette emergency exit in conjunction with the safety program.

- The Authority's Police Department implemented the use of the roving patrol (two officers in uniform working together



assigned to three or four stations) as opposed to the stationing of one officer at one station as a fixed assignment.

Service Improvements & Marketing

- Weekday express bus service was instituted between West Medford and Haymarket Square, and Elm Street and Haymarket Square via I-93.

- Dime-time, a novel marketing program designed to increase ridership in the off-peak hours, was instituted. From 10:00 a.m. until 1:00 p.m., Monday through Friday, the fare was reduced from 25¢ to 10¢ on the Red, Orange and Blue Lines and from 50¢ to 25¢ for those entering at Quincy Stations. The program increased off-peak ridership by some 15%.

- Mini-bus service was established on community-designed routes in Somerville, Brookline, Jamaica Plain, Brighton-Allston, Cambridge, Salem and Lynn.

- The Senior Citizen Registration Mobile Unit covered approximately 35 cities and towns, registering about 3,000 senior citizens.

- The Authority began to pipe music over the public address systems at Quincy Center and Park Street Stations.

- Radio jingles, newspaper or magazine ads and outdoor billboards were used to promote and market the Authority's many transit services.

Private Carriers

- The Authority, through a Federal Advance Acquisition Loan, purchased 145 miles of Penn Central track and related properties.

- The Authority initiated subsidy payments to the Penn Central Railroad for the Framingham-Boston service.

- The Boston & Maine operated 2,888,000 car miles, 1,522,000 train miles and carried approximately 5,100,000 passengers.

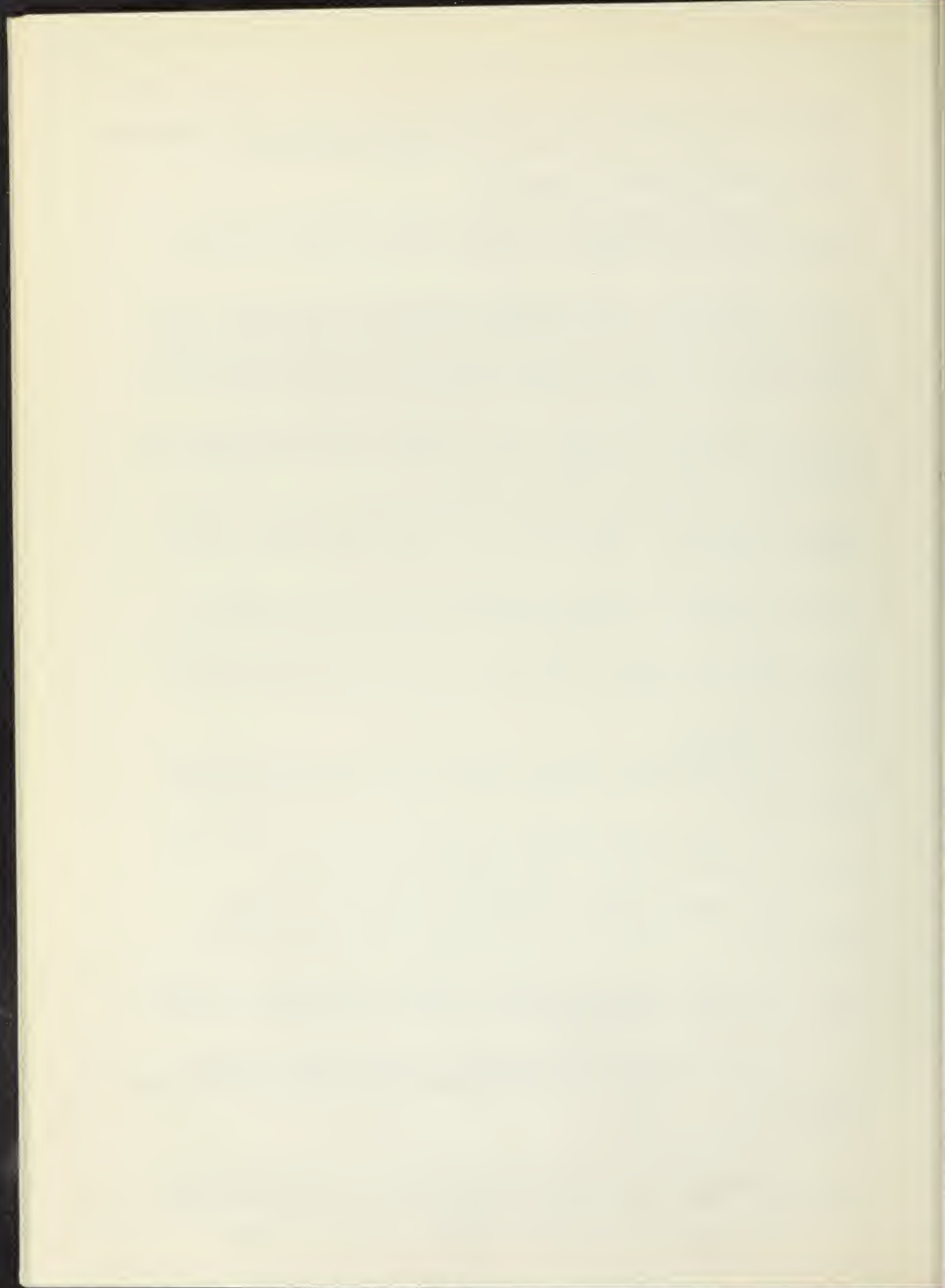
- The Penn Central operated 751,500 coach miles, 326,000 Budd car miles, 188,300 locomotive miles and carried approximately 2,103,000 passengers.

- Rapid Transit Inc. operated 313,450 common carrier miles, 14,670 charter miles and carried approximately 1,271,000 passengers.

Station Modernization

- Phase I of the Station Modernization Program was concluded with the completion of a Minor Station Group Contract.

- The design phase of the modernization of the six



elevated stations on the Orange Line was completed.

Federal Grants

- The Urban Mass Transportation Administration awarded a \$13,126,410 capital facilities grant for the purchase of the right-of-way for the Boston & Maine's Reading Branch from Charlestown to Wilmington Junction. Also included in this grant were funds for certain other land takings associated with the Haymarket-North project.

- Capital Facilities Grants totaling \$44,746,850 were awarded by the Urban Mass Transportation Administration for: the purchase of 80 new rapid transit cars (44 Orange Line and 36 Blue Line); Safety Improvements (fire protection and prevention systems, emergency escape and access and communication improvements); Plant Improvements Phase I and II (plant and facility modernization, parking lot improvements, acquisition and installation of communications equipment); the purchase of 50 new air-conditioned, radio equipped trackless trolleys, and restoration of the Orange Line elevated structure.

Other Developments

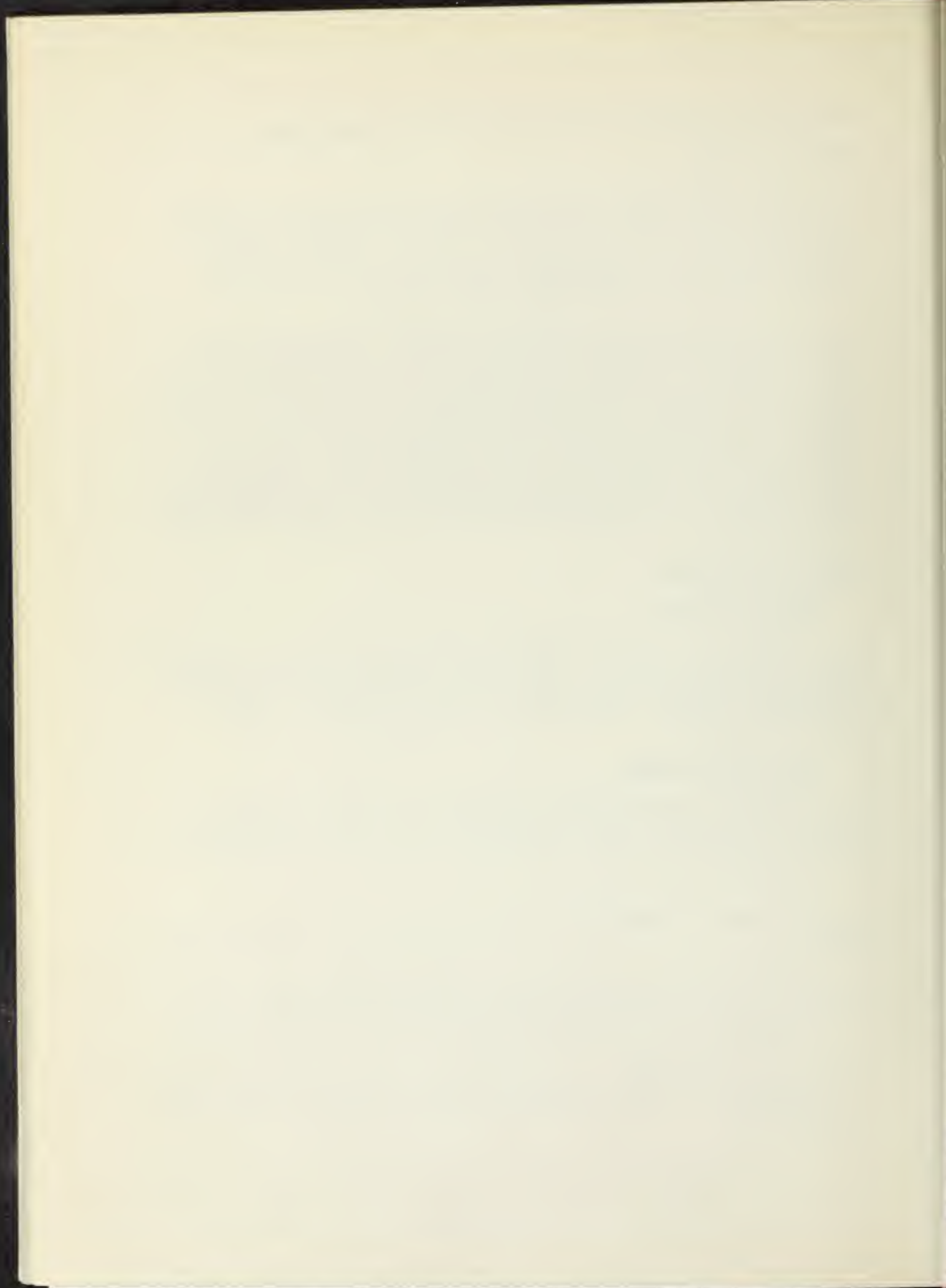
Advisory Board

- The year 1973 saw frequent meetings between the Authority and its Advisory Board. The latter's Budget Committee was given many in-depth briefings during the year on a variety of issues, thereby aiding mutual understanding of each others' problems.

Arbitration Award

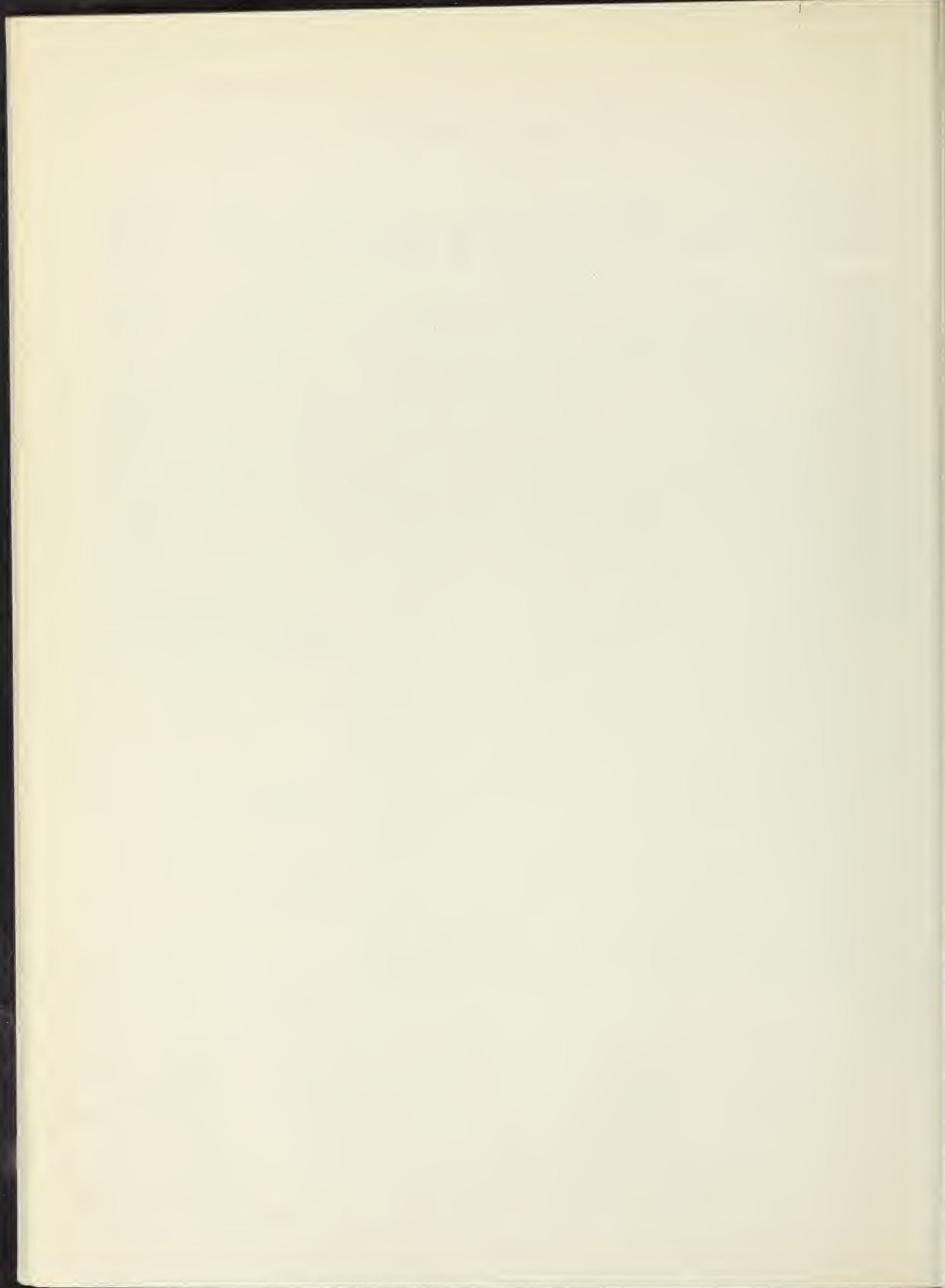
- Contract negotiations between the Authority and its largest union were moved to arbitration, and on September 26, 1973 an arbitration award was made. Key features include:

- a three-year contract
- no salary increase for 1973, and 2½% for both 1974 and 1975
- approximately one-half of a cost-of-living adjustment for 1973, and full cost-of-living for 1974 and 1975
- authorization for the Authority to hire temporary help in several categories
- elimination of a ten-minute "turn in time" on the part of operators



(T) STATISTICS 1973

Boston Elevated Railway Company (chartered).....	1894
Public Control Act (by Legislation).....	1918
Metropolitan Transit Authority - MTA (by Legislation).....	1947
Massachusetts Bay Transportation Authority (T) (by Legislation).....	1964
Population of 79 Communities in (T) district (1970 U.S. Census).....	2,763,410
Number of Bus Routes.....	205
Number of Streetcar Routes.....	5
Number of Rapid Transit Routes.....	3
Number of Trackless Trolley Routes.....	4
Buses.....	1209
Streetcars.....	295
Rapid Transit Cars.....	343
Trackless Trolleys.....	55
Rapid Transit Stations.....	51
Single Track Rapid Transit Train Mileage.....	77.3
Single Track Streetcar Mileage.....	86.7
Proposed Rapid Transit Extensions (miles).....	50.3
Employees (December 31, 1973).....	6627
Collective Bargaining Units.....	27
Daily Passenger Load (approx.).....	489,000
Annual Passenger Load (approx.).....	146,000,000
Annual Revenue Miles Operated.....	40,750,384
Bus Revenue Miles.....	23,212,289
Fellsway-Charlestown-Eagle Street.....	5,524,726
Albany-Bartlett.....	5,468,133
Arborway.....	3,628,926
Somerville-Arlington Heights.....	3,093,863
Quincy.....	2,319,979
Lynn.....	2,222,090
Tewksbury.....	954,572
Street Car Revenue Miles.....	6,313,820
Reservoir.....	4,824,801
Arborway.....	1,489,019
Trackless Trolley Revenue Miles.....	898,931
Bennett Street.....	898,931
Rapid Transit Revenue Miles.....	10,325,344
Mainline (Orange).....	2,907,386
Cambridge-Dorchester (Red).....	2,637,399
South Shore Extension (Red).....	2,621,227
East Boston (Blue).....	2,159,332



ARTHUR ANDERSEN & CO.
BOSTON, MASSACHUSETTS

To the Board of Directors of

Massachusetts Bay Transportation Authority:

We have examined the balance sheet and statement of bonds payable of the MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (a political subdivision of the Commonwealth of Massachusetts) as of December 31, 1973, and the related statements of revenue and cost of service, unreimbursed cost of service, and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying financial statements present fairly the financial position of the Massachusetts Bay Transportation Authority as of December 31, 1973, and the results of its operations and changes in financial position for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Arthur Andersen & Co.

Boston, Massachusetts,

March 13, 1974.



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

BALANCE SHEET - DECEMBER 31, 1973

A S S E T S

TRANSPORTATION PROPERTY, at cost (Notes 1 and 6):

Transportation property in service
Less- Reserve for depreciation

Construction in progress
Property held for expansion (Note 11)

SPECIAL FUNDS--Cash, Certificates of Deposit
and U. S. Government Securities, at cost:

Construction funds, held by the
bond fiscal agent
Funds received for relocation of
facilities (Note 3)
Federal grants and other special
funds (Note 1)

CURRENT ASSETS:

Cash
Certificates of Deposit
Accounts receivable--
Commonwealth of Massachusetts
Boston Redevelopment Authority (Note 8)
Other
Materials and supplies, at average cost
Prepaid expenses

DEFERRED CHARGES:

Unamortized expansion and modernization
costs (Notes 1 and 9)
Other

L I A B I L I T I E S

LONG-TERM DEBT, exclusive of current
maturities (Note 5):

Bonds payable
Loan payable to Department of Transportation
including interest of \$1,262,422 (Note 11)

UNREIMBURSED COST OF SERVICE (Note 1)

CURRENT LIABILITIES:

Current maturities of bonds payable (Note 5)
Notes payable, due December 31, 1974
Accounts payable
Accrued liabilities--
Payroll
Interest
Other

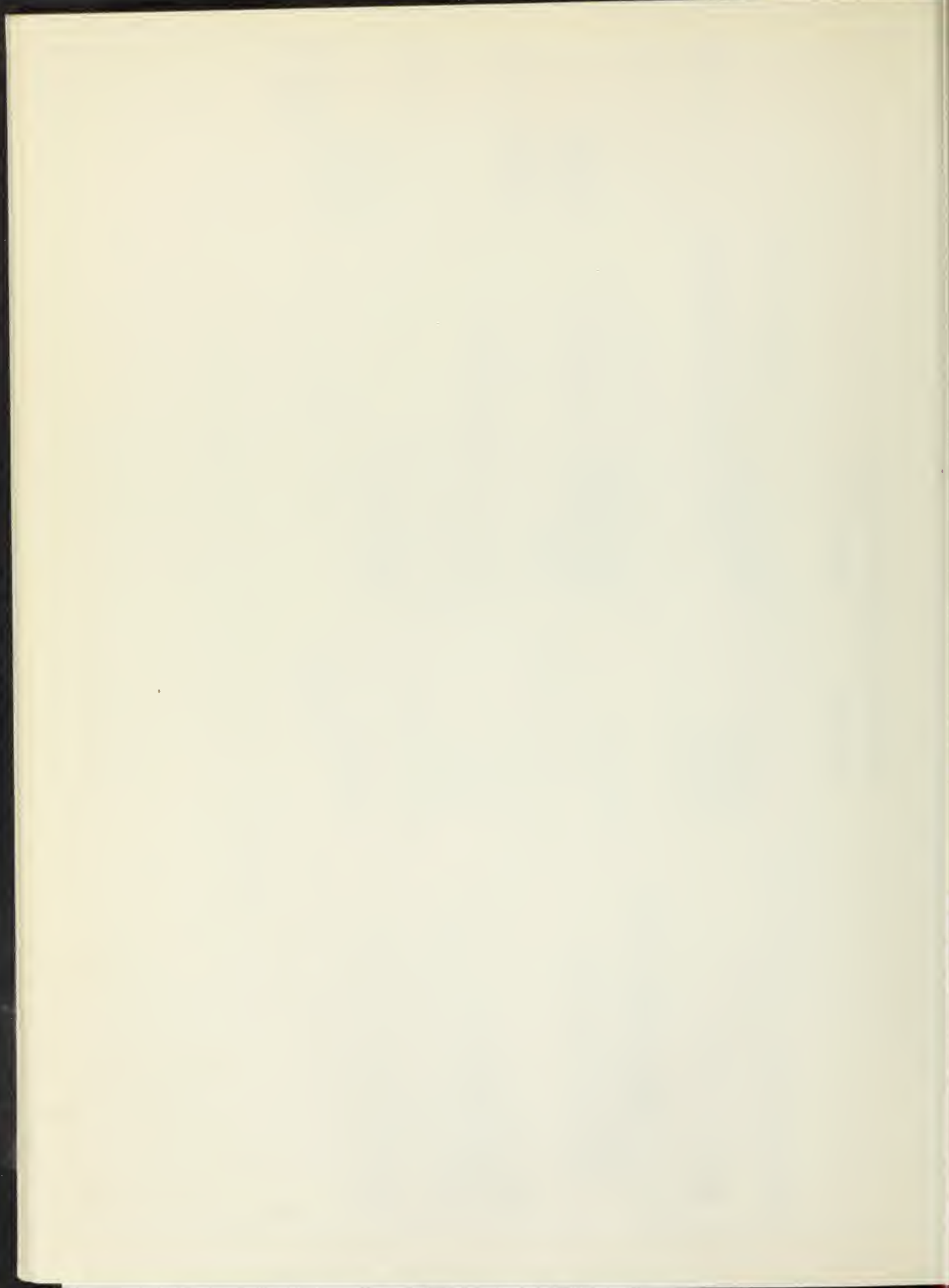
COMMITMENTS AND CONTINGENCIES (Notes 1,
4 and 6)

DEFERRED CREDITS (Note 3)

GRANTS (Notes 1 and 8):
Federal grants
Less- Amortization

Boston Redevelopment Authority

The accompanying notes are an integral part of these financial statements.



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

STATEMENT OF REVENUE AND COST OF SERVICE

FOR THE YEAR ENDED DECEMBER 31, 1973

OPERATING REVENUE:

Transportation	\$ 52,209,205
Other	1,452,050

	\$ 53,661,255

OPERATING EXPENSES (Note 10):

Transportation service	\$ 59,851,361
Maintenance	34,553,139
Electric power	7,253,469
Depreciation and amortization (Notes 1 and 8)	9,491,778
General and administrative expenses-	
Salaries and wages	7,130,845
Employee pension and insurance	
benefits (Note 1)	19,011,487
Injuries and damages and workmen's	
compensation claims (Note 1)	2,376,458
Other	2,544,865

\$ 142,213,402

Operating loss

\$ (88,552,147)

OTHER INCOME, including interest of \$5,966,510

6,170,996

INTEREST EXPENSE, including \$13,479,287
on long-term debt

(17,289,545)

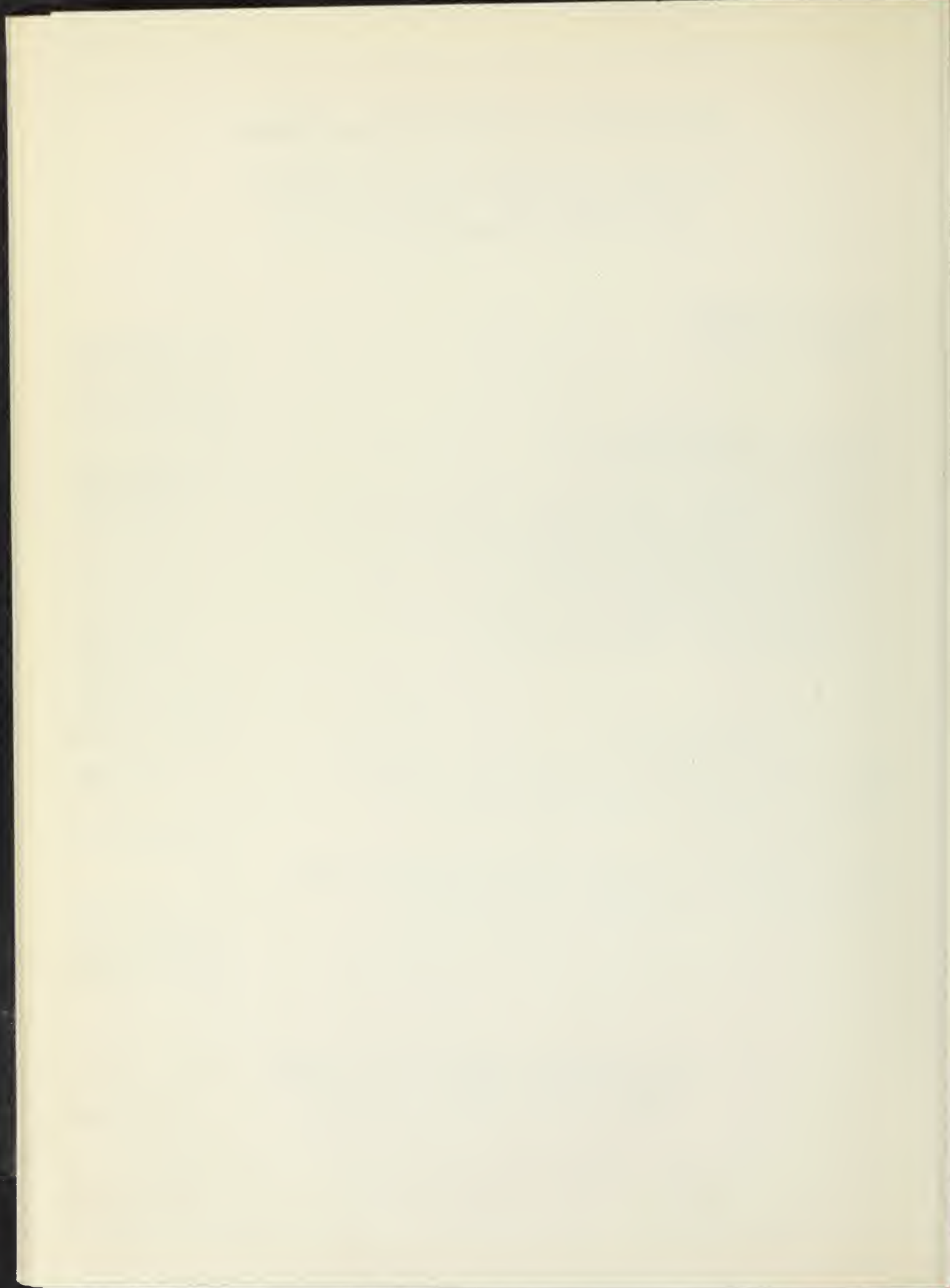
RAILROAD COMMUTER SUBSIDIES, including amortization
of the original Railroad Contract Assistance
Program of \$325,000 (Notes 1, 2 and 9)

(4,644,562)

Cost of service in excess of revenue

\$(104,315,258)
=====

The accompanying notes are an integral
part of these financial statements.



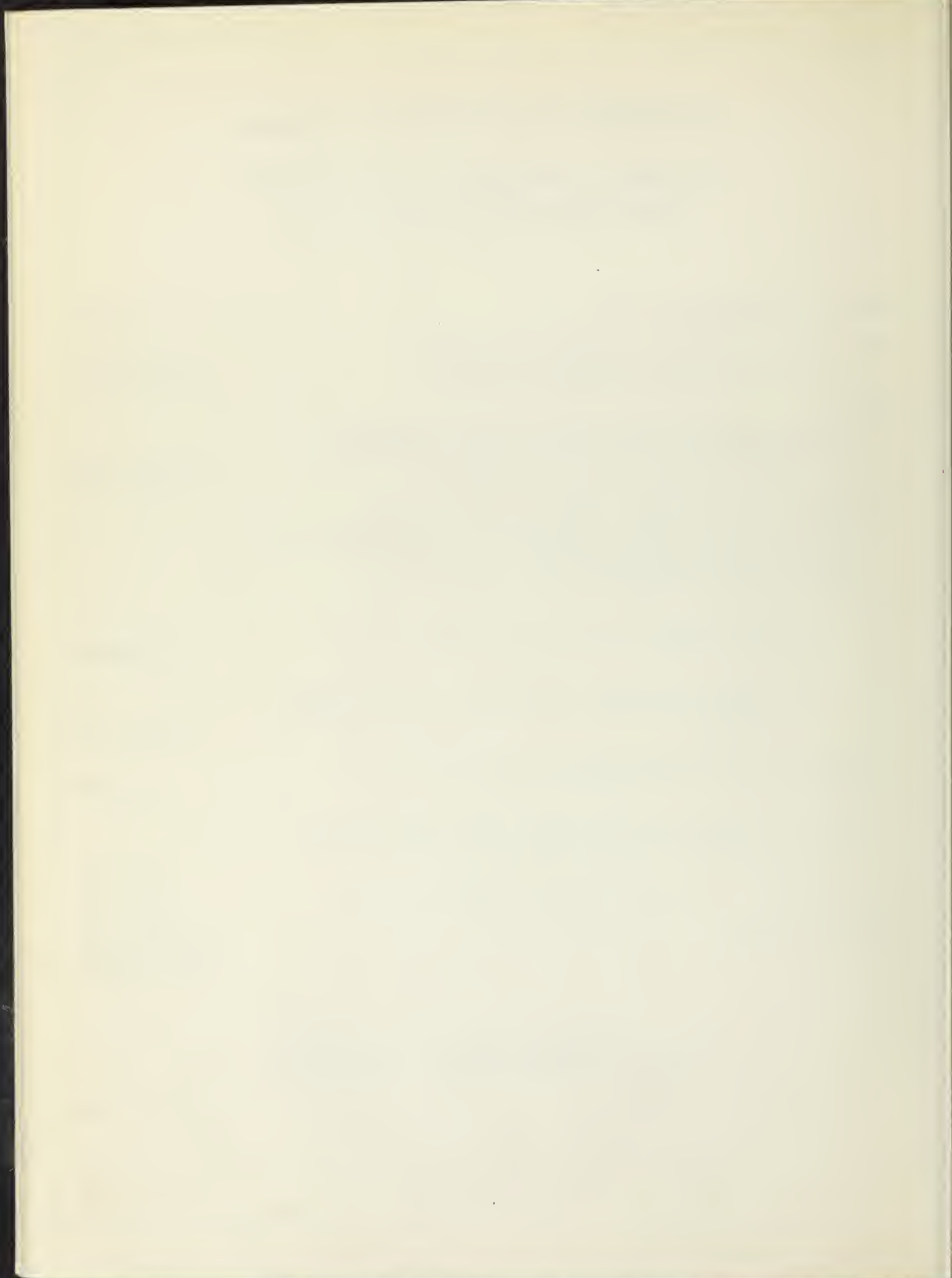
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

STATEMENT OF UNREIMBURSED COST OF SERVICE

FOR THE YEAR ENDED DECEMBER 31, 1973

BALANCE DECEMBER 31, 1972	\$ 8,658,790
ADD- Cost of service in excess of revenue for the year ended December 31, 1973	104,315,258
DEDUCT:	
Cost of service reimbursed by the Commonwealth of Massachusetts to be assessed to the cities and towns constituting the Authority	52,341,827
Contract Assistance, portion of the cost of service paid by the Commonwealth of Massachusetts in accordance with a contract for financial assistance between the Authority and the Commonwealth (Note 7)-	
Assistance pursuant to Chapter 1140 of the Acts of 1973	35,000,000
Assistance pursuant to Chapter 563 of the Acts of 1964 and Chapter 147 of the Acts of 1968, as amended	15,051,861
Cost of service reimbursed by the cities and towns outside the Authority's area	409,193
State diesel and gasoline fuel taxes reimbursable to the Authority in accordance with Section 2 of Chapter 563 of the Acts of 1964	359,039
Amortization of Federal grants (Notes 1 and 8)	1,853,690
BALANCE DECEMBER 31, 1973 (Note 1)	\$ 7,958,438
	=====

The accompanying notes are an integral
part of these financial statements.



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

STATEMENT OF CHANGES IN FINANCIAL POSITION

FOR THE YEAR ENDED DECEMBER 31, 1973

FUNDS WERE USED FOR:

Cost of service in excess of revenue	\$104,315,258
Less- Charges to cost of service in excess of revenue which did not require funds-	
Depreciation of transportation property (Note 1)	(9,347,497)
Amortization of deferred charges (Notes 1 and 9)	(469,281)
Interest accrued on loan from Federal Department of Transportation (Note 11)	(1,262,422)
	<u>\$ 93,236,058</u>
Purchase of property held for expansion	19,500,000
Additions to transportation property, net	60,211,943
Increase in deferred charges	190,641
Reduction in bonds payable (Notes 5 and 6)	9,731,925
	<u>\$182,870,567</u>
Total funds used	<u>-----</u>

FUNDS WERE PROVIDED BY:

Net cost of service reimbursable by the Commonwealth of Massachusetts for the 1973 deficit to be assessed to the cities and towns constituting the Authority (Note 1)	\$ 52,341,827
Contract assistance received from the Commonwealth of Massachusetts (Note 7)	50,051,861
Reimbursement by the Commonwealth of Massachusetts of state diesel and gasoline fuel taxes	359,039
Reimbursement by cities and towns outside the Authority's area for service provided	409,193
Decrease in special funds	34,422,311
Loan from Federal Department of Transportation	19,500,000
Grants from Federal and other sources (Notes 1 and 8)	24,241,701
Increase in deferred credits	105,226
	<u>\$181,431,158</u>
Total funds provided	<u>-----</u>

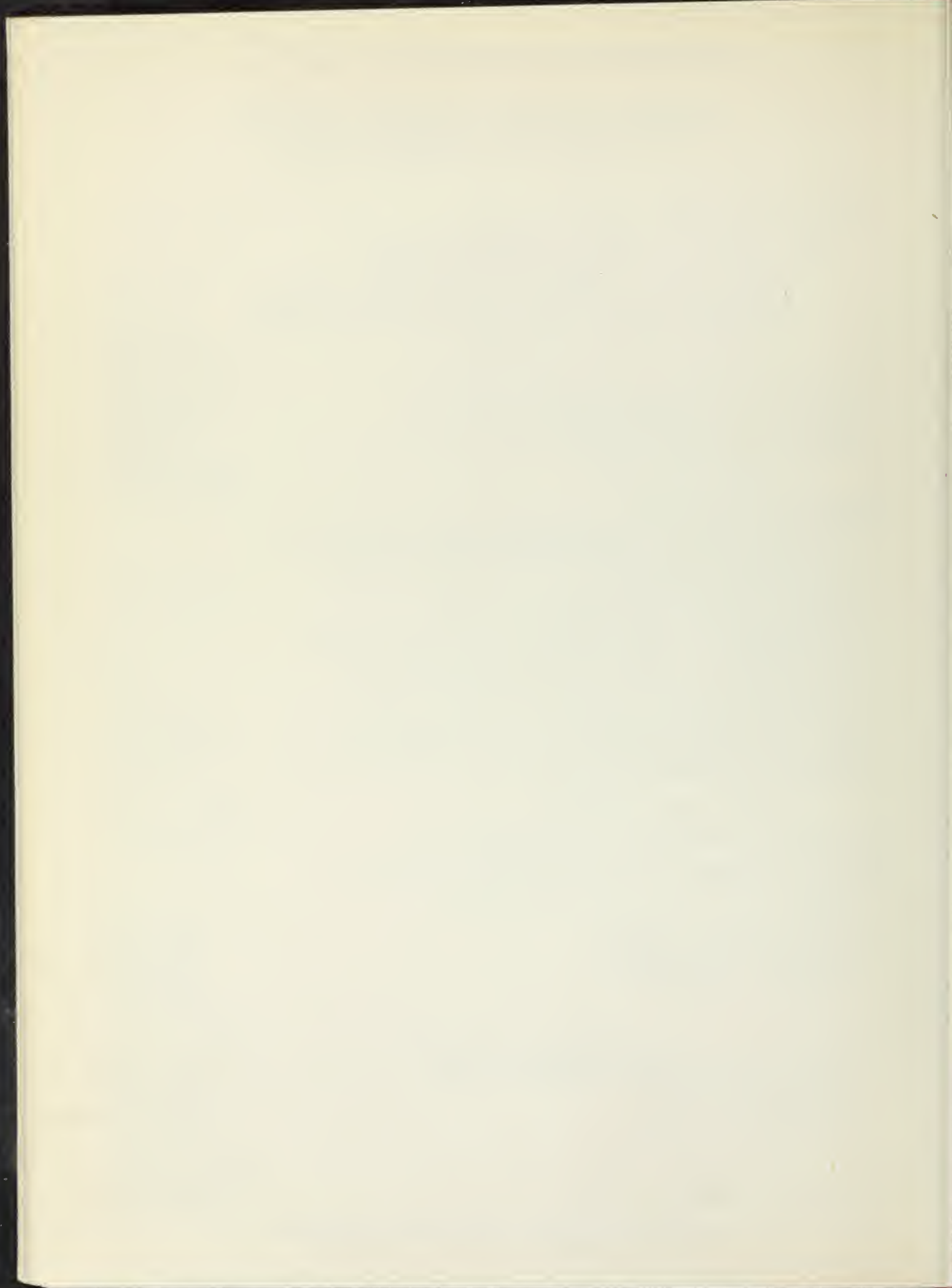
RESULTING IN A WORKING CAPITAL DECREASE OF:

\$ 1,439,409
=====

CHANGES IN ELEMENTS OF WORKING CAPITAL CONSIST OF:

Increase (decrease) in current assets-	
Cash	\$ 8,728,588
Certificates of deposit	9,449,824
Accounts receivable	2,650,968
Materials and supplies	185,260
Prepaid expenses	(163,957)
	<u>\$ 20,850,683</u>
Increase (decrease) in current liabilities-	
Current maturities of long-term debt	\$ (117,334)
Notes payable	20,000,000
Accounts payable	2,583,914
Accrued liabilities	(176,488)
	<u>\$ 22,290,092</u>
Decrease in working capital	<u>\$ 1,439,409</u> =====

The accompanying notes are an integral
part of these financial statements.



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

STATEMENT OF BONDS PAYABLE (NOTE 5)

DECEMBER 31, 1973

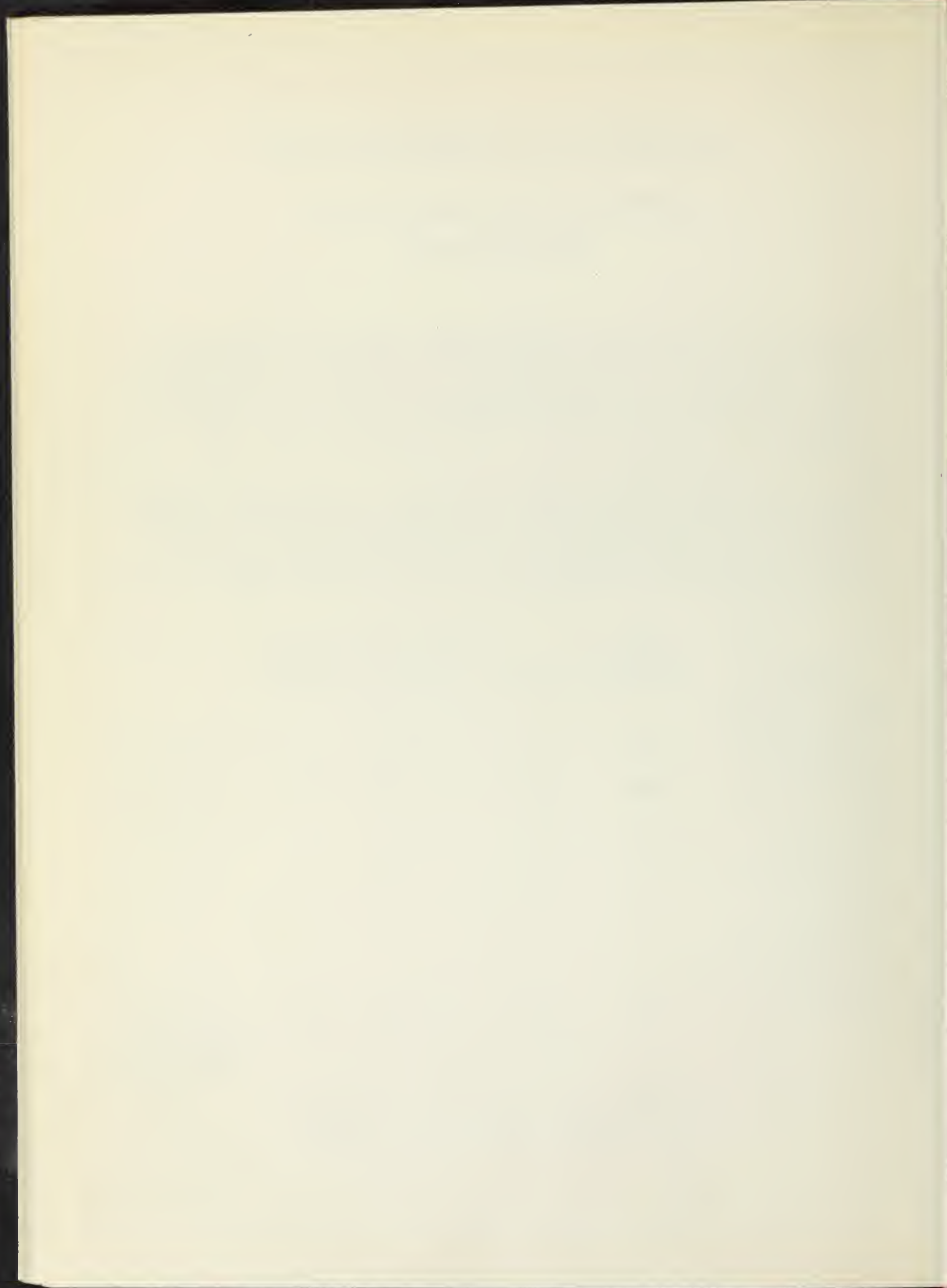
Massachusetts Bay Transportation Authority General Transportation System Bonds issued under General Laws, Chapter 161A, Section 23 of the Commonwealth of Massachusetts, 1967 Series A, dated March 1, 1967, 1970 Series A, dated September 1, 1970, and 1972 Series A, dated September 1, 1972, are all payable in annual installments on March 1; interest is payable semiannually on March 1 and September 1.

1967 Series A Bonds - The proceeds of the sale of the 1967 Series A Bonds were required to be used for payment of \$40,000,000 of Bond Anticipation Notes outstanding and the balance of \$70,000,000 was required to be deposited in the Bond Proceeds accounts. These bonds were issued to provide funds for the purposes outlined below. The debt outstanding at December 31, 1973, is as follows:

<u>Purpose</u>	<u>First Principal Payment</u>	<u>Maturity</u>	<u>Approximate Annual Payment</u>	<u>Average Interest Rate</u>	
Express service transportation facilities	1969	2007	\$1,900,000	3.78%	\$64,600,000
Agreement with railroads	1968	1982	325,000	3.75	3,050,000
Buses and other purposes	1968	1979	325,000	3.75	1,950,000
Local service transportation facilities	1969	2007	50,000	3.78	1,700,000
Capital cost of certain transportation facilities including yards, shops and rolling stock	1969	2007	625,000	3.78	22,075,000

					\$93,375,000

The accompanying notes are an integral part of these financial statements.



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

STATEMENT OF BONDS PAYABLE (NOTE 5)

DECEMBER 31, 1973

(Continued)

1970 Series A Bonds - The proceeds of the sale of the 1970 Series A Bonds were required to be used for payment of \$5,365,000 of Bond Anticipation Notes outstanding and the balance of \$61,500,000 was required to be deposited in the Bond Proceeds accounts. These bonds were issued to provide funds for the purposes outlined below. The debt outstanding at December 31, 1973, is as follows:

<u>Purpose</u>	<u>First Principal Payment</u>	<u>Year of Maturity</u>	<u>Approximate Annual Payment</u>	<u>Average Interest Rate</u>	
Express service transportation facilities	1971	2010	\$1,540,000	6.31%	\$56,880,000
Buses and other purposes	1971	1982	295,000	6.06	2,615,000
Purchase and improvement of the Cambridge subway	1971	1980	185,000	6.08	1,295,000

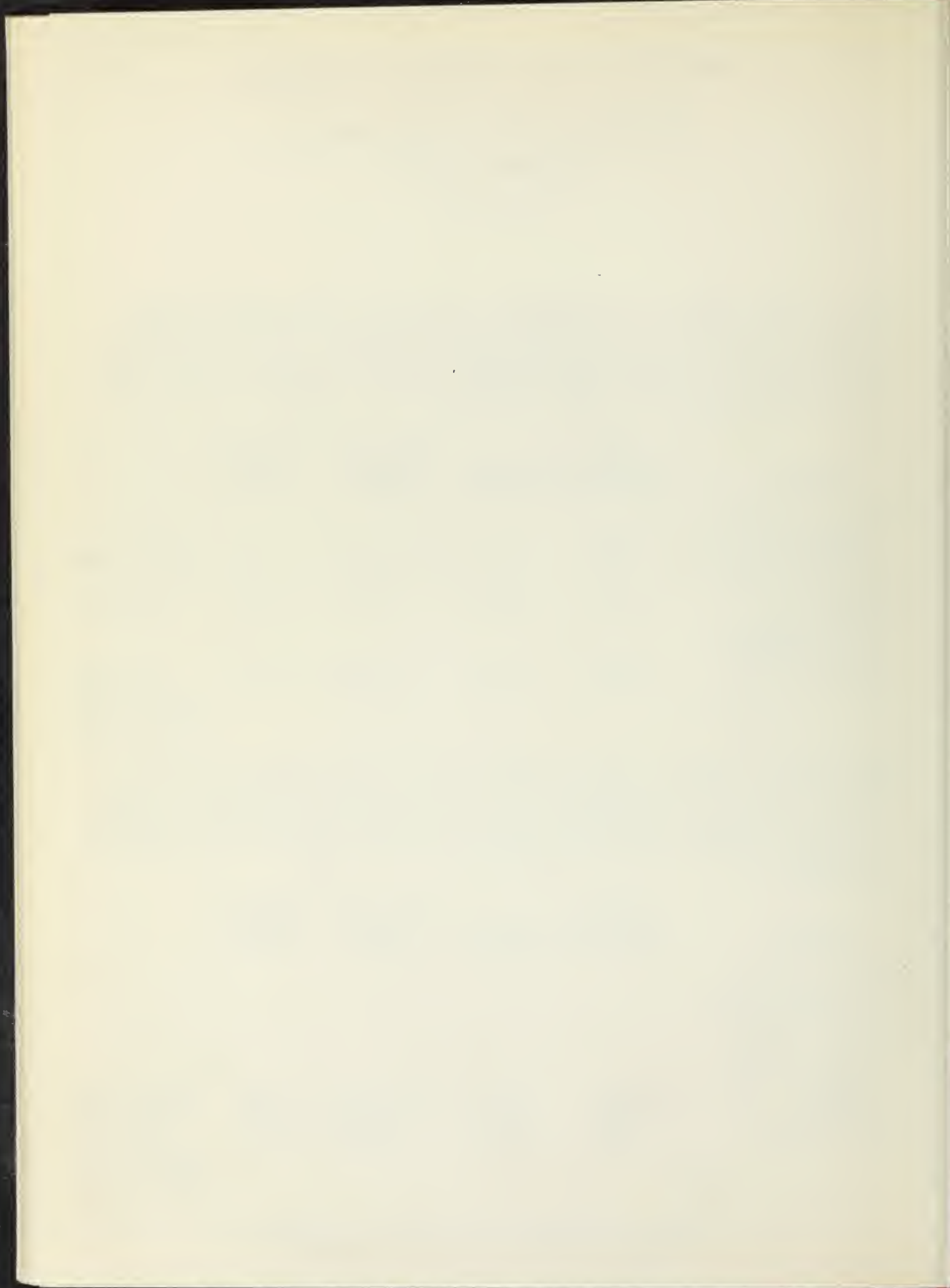
					\$60,790,000

1972 Series A Bonds - The proceeds of the sale of the 1972 Series A Bonds were used for payment of \$8,000,000 bond anticipation notes and the balance of \$32,000,000 was deposited in the Bond Proceeds accounts. These bonds were issued to provide funds for the purposes outlined below. The debt outstanding at December 31, 1973, is as follows:

<u>Purpose</u>	<u>First Principal Payment</u>	<u>Year of Maturity</u>	<u>Approximate Annual Payment</u>	<u>Average Interest Rate</u>	
Express service transportation facilities and other capital costs of the transportation system	1973	2012	\$ 865,000	5.26%	\$33,635,000
Bus acquisition	1973	1984	290,000	5.40	3,210,000
Bus garages	1973	1984	170,000	5.40	1,830,000

					\$38,675,000

The accompanying notes are an integral
part of these financial statements.



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

STATEMENT OF BONDS PAYABLE (NOTE 5)

DECEMBER 31, 1973

(Continued)

Metropolitan Transit Authority Bond, payable in semiannual installments of \$500,000 to December, 2020 -- Interest payable is the interest payable by the Boston Metropolitan District on their contra debt and refunding issues, which for the year ended December 31, 1973, was 3.98%.

\$46,918,372

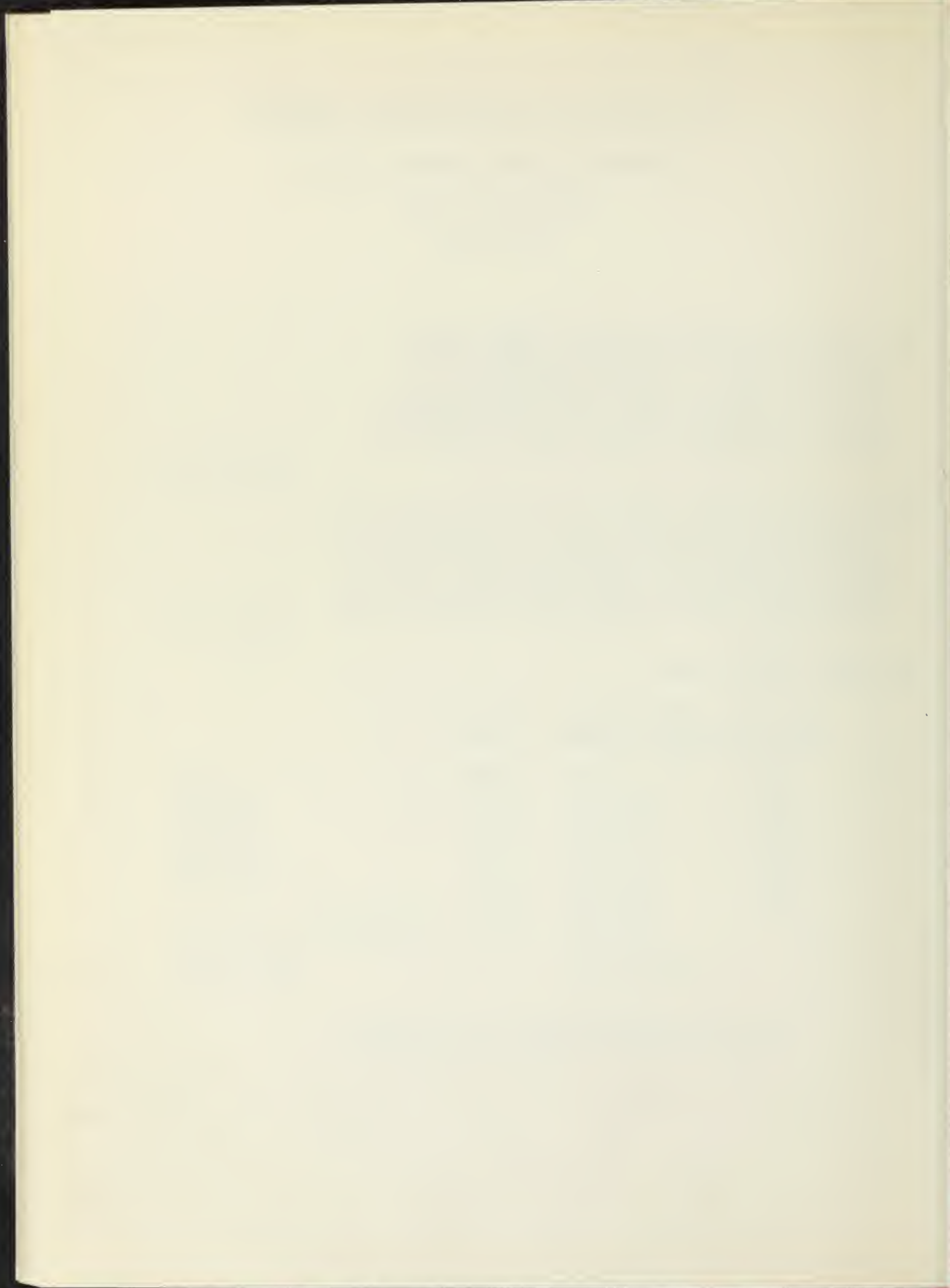
Rapid Transit Bond, payable in annual installments of \$536,259 to November, 2024 -- Interest is the actual interest on the City of Boston Transit Debt and refunding issues less income collected on the City's transit debt sinking funds, which for the year ended December 31, 1973, was 3.96%.

\$27,349,223

Equipment Serial Bonds:

<u>Year of</u> <u>Maturity</u>	<u>Approximate</u> <u>Annual Payment</u>	<u>Interest</u> <u>Rate</u>		
1974	\$ 5,000	3.00%		\$ 5,000
1975	122,000	3.00		232,000
1977	219,000	3.00		876,000
1978	176,000	3.00		878,000
1981	127,000	1.50		1,016,000
1987	128,000	2.90		1,785,000
1988	131,000	2.90		1,965,000
1993	169,000	3.00	\$3,380,000	
	100,000	3.20	<u>2,000,000</u>	5,380,000
	-----			-----
	\$1,177,000			\$12,137,000
	=====			-----

The accompanying notes are an integral part of these financial statements.



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

STATEMENT OF BONDS PAYABLE (NOTE 5)

DECEMBER 31, 1973

(Continued)

Construction Bonds:

2.00%, payable \$102,000 per annum to November 21, 1979, and \$4,590,000 on November 25, 1979	\$ 5,202,000
1.50%, payable \$84,333 per annum to March 1, 1981, and \$3,781,667 on March 1, 1981	4,456,333
2.10%, payable \$22,000 per annum to January 15, 1982, and \$990,000 on January 15, 1982	1,188,000
2.75%, payable \$47,000 per annum to March 1, 1983, and \$2,115,000 on March 1, 1983	2,585,000
2.30%, payable \$10,000 per annum to March 1, 1984, and \$450,000 on March 1, 1984	560,000
3.00%, payable \$55,000 per annum to July 1, 1988, and \$2,475,000 on July 1, 1988	3,300,000
3.60%, payable \$69,667 per annum to February 1, 1989, and \$3,135,000 on February 1, 1989	4,249,667
3.50%, payable \$19,000 per annum to September 15, 1990, and \$855,000 on September 15, 1990	1,178,000
3.20%, payable \$40,000 per annum to April 15, 1993, and \$1,800,000 on April 15, 1993	2,600,000

\$ 25,319,000

\$304,563,595

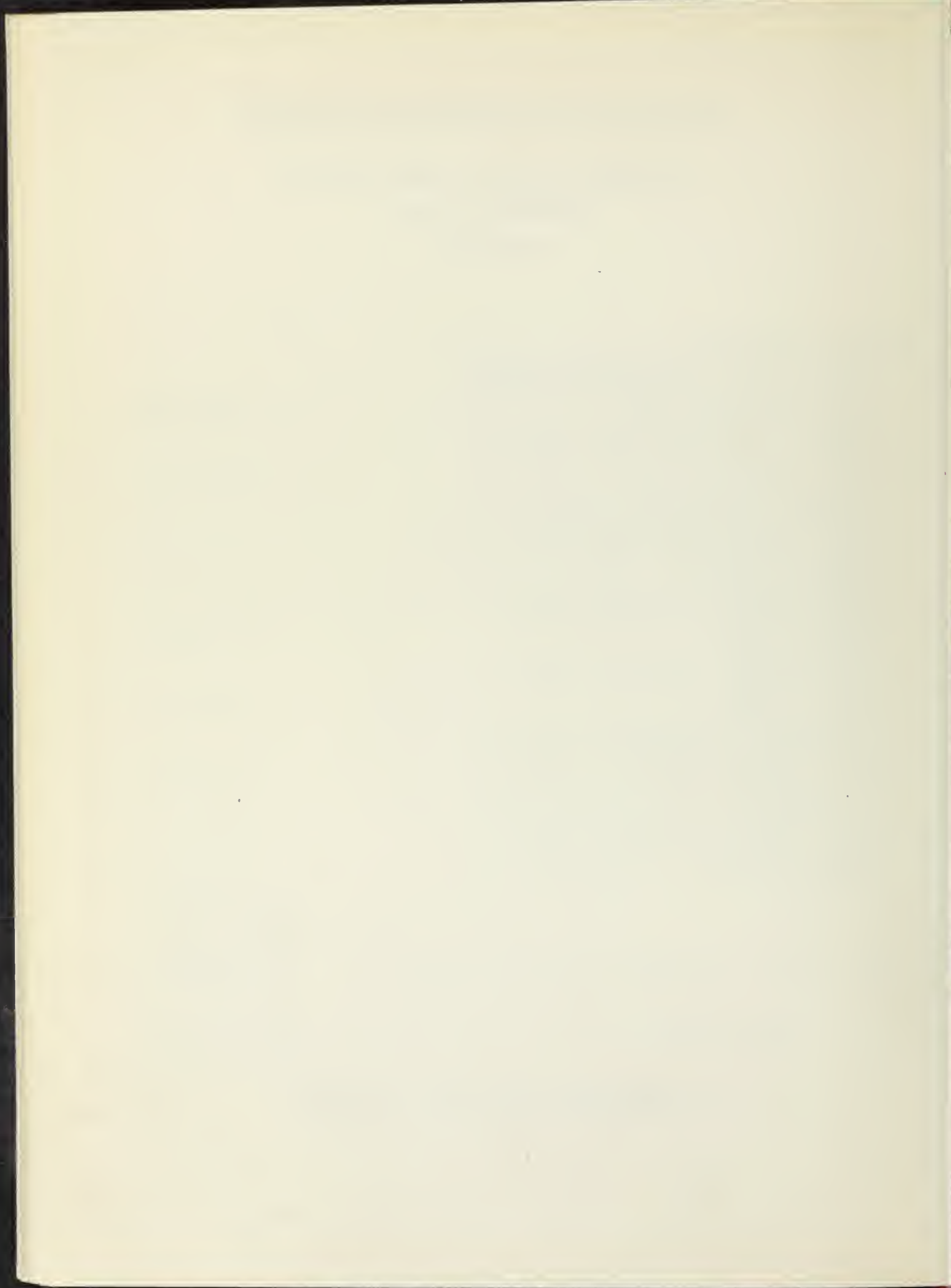
9,732,259

Less- Current maturities of bonds payable

Bonds payable

\$294,831,336
=====

The accompanying notes are an integral part of these financial statements.



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 1973

(1) Summary of Significant Accounting Policies

(a) Transportation Property

Transportation property is stated at historical cost. Such costs include MBTA labor costs for employees working on capital projects plus related fringe benefits and an allocated share of general and administrative costs. The cost of funds required to finance the expansion of the transportation system is expensed currently.

(b) Depreciation

Depreciation is provided in the accounts based on the straight-line method at rates which are designed to amortize the original cost of the property over its estimated useful life. The major categories of Transportation property and the depreciation rates used on the depreciable portion of the property are:

	Cost	Rates		
		Low	High	Average
Ways and structures	\$208,815,470	1.23%	10.00%	2.31%
Equipment	105,014,552	2.22%	33.33%	4.66%

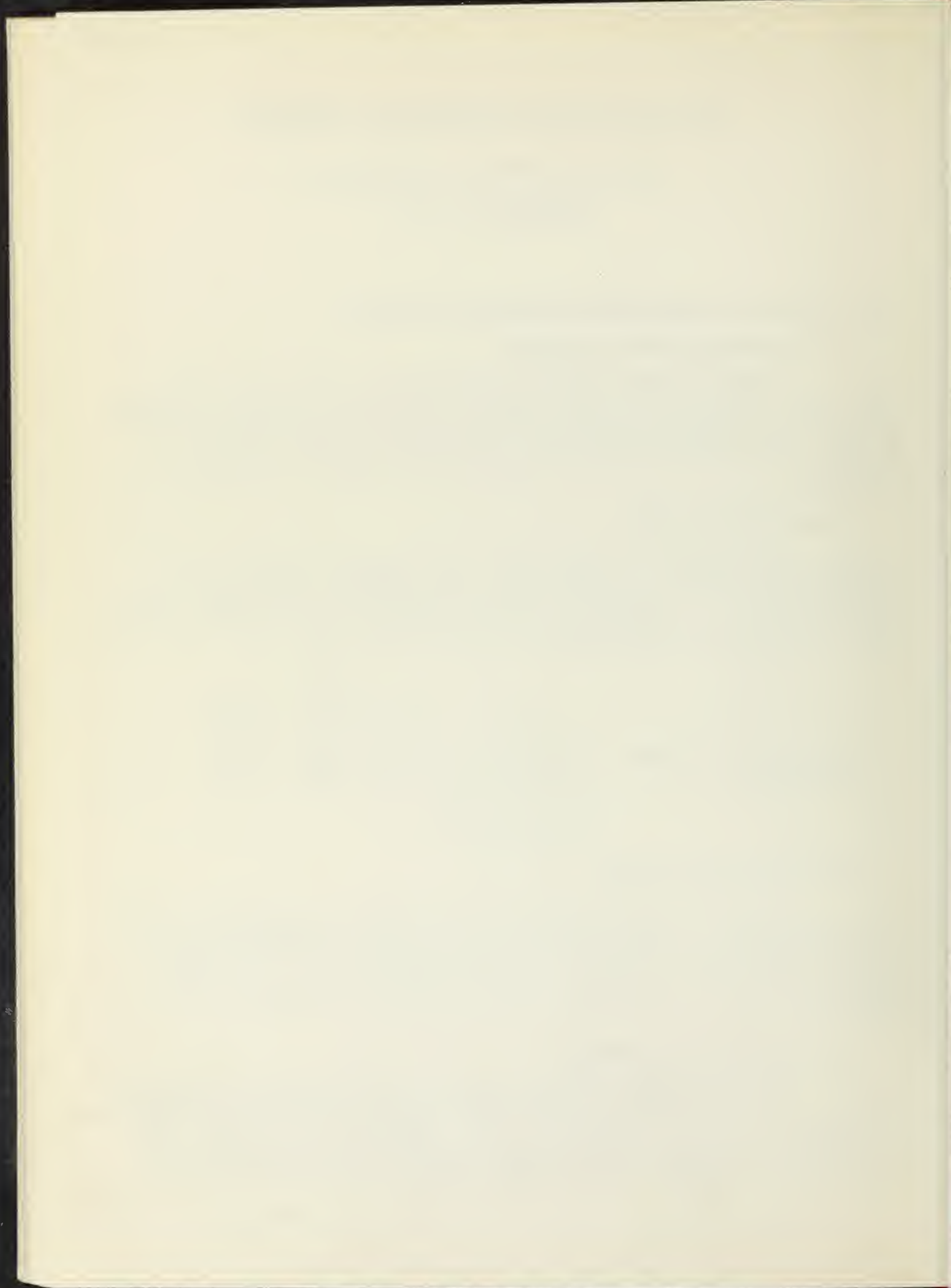
	\$313,830,022			
	=====			

(c) Deferred Charges

Certain costs incurred by the Authority, primarily related to the expansion and modernization of the transportation system as further described in Note 9, have been capitalized. These costs are then amortized by charges to cost of service over the future periods in which the benefit to the Authority is estimated to be realized.

(d) Injuries and Damages

The Authority is a self-insurer on claims for injuries and damages to the extent of \$100,000 per accident. Insurance coverage is carried on claims in excess of that amount up to a maximum limit of \$15,100,000 per accident. The Authority accounts for injuries and damages by charges to operating expenses as payments are made.



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 1973

(Continued)

(1) Summary of Significant Accounting Policies (Continued)

(e) Workmen's Compensation Insurance

Effective May 1, 1965, the Authority became a self-insurer on workmen's compensation claims under the workmen's compensation laws of the Commonwealth of Massachusetts to the extent of \$50,000 per occurrence. Insurance coverage is carried on each occurrence in excess of that amount up to a maximum limit of \$4,050,000 per occurrence. The Authority accounts for these claims by charges to operating expenses as payments are made.

(f) Unreimbursed Cost of Service

The legislative act under which the Massachusetts Bay Transportation Authority was established provides, among other things, that the Commonwealth of Massachusetts shall reimburse the Authority for the net cost of service. The amounts reimbursed are then assessed to the 79 cities and towns constituting the Authority. The "net cost of service", as defined, includes a charge equal to the payments made on long-term debt during the period, and does not include a charge for depreciation. For financial reporting purposes however, the Authority follows the generally accepted method of depreciating the cost of property over its estimated useful life.

The cumulative excess of depreciation charges over payments made on long-term debt is charged to the unreimbursed cost of service account and is recovered in years when payments made on long-term debt exceed depreciation. During the year ended December 31, 1973, payments on long-term debt exceeded depreciation charges by \$32,481. This excess is primarily due to the fact that payments are being made on certain long-term debt, the proceeds of which have been expended on construction which is still in progress and is not yet being depreciated.



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 1973

(Continued)

(1) Summary of Significant Accounting Policies (Continued)

(f) Unreimbursed Cost of Service (Continued)

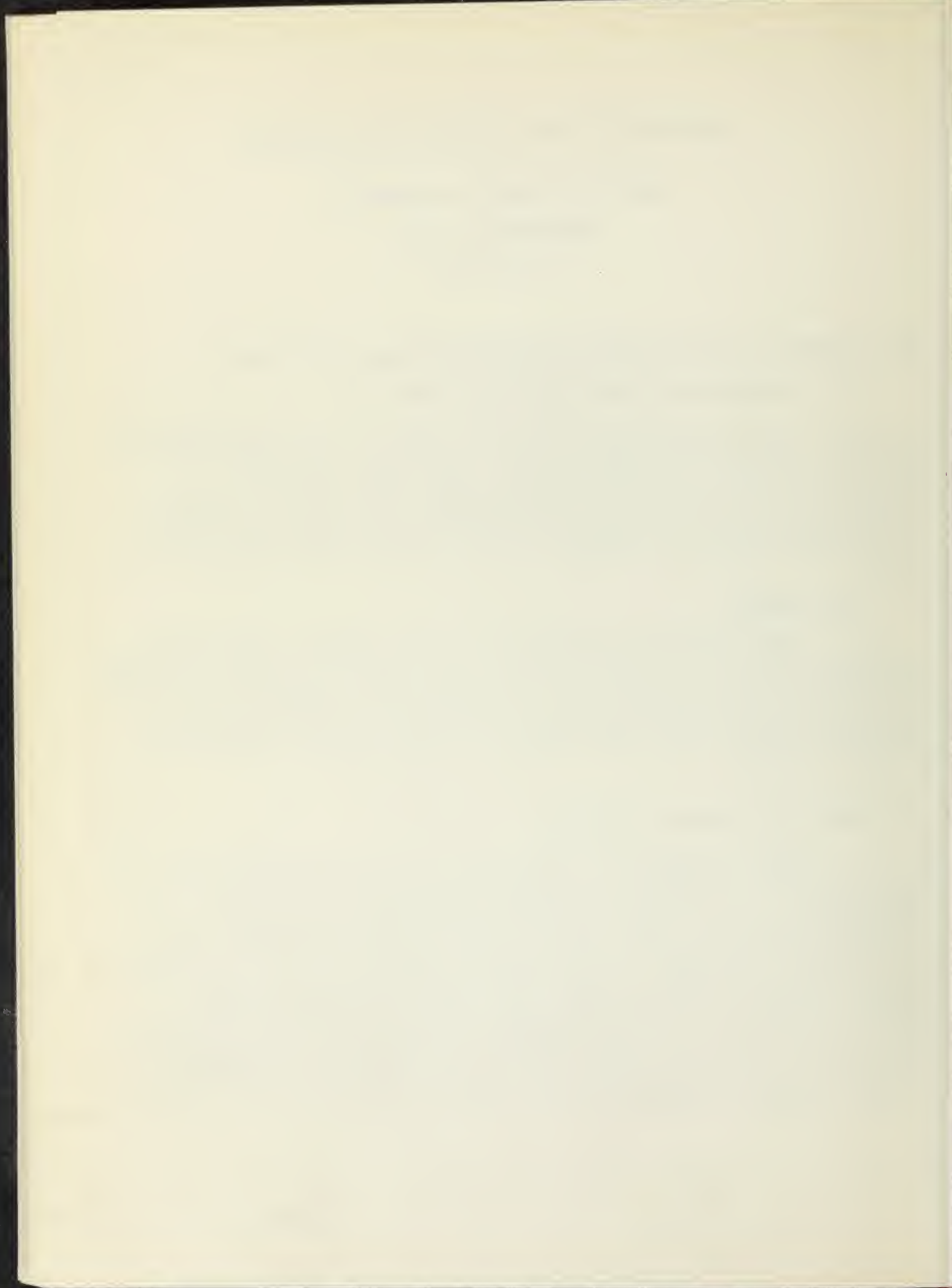
In addition, the "net cost of service" as defined does not include a charge for interest accrued on the Loan Payable to the Federal Department of Transportation (\$1,262,422) (Note 11). However, for financial reporting purposes, this amount has been charged to cost of service, in accordance with generally accepted accounting principles. Interest accrued will be included in "net cost of service" assessable to the cities and towns in the year it is paid.

(g) Grants

The Authority receives grants from certain governmental agencies (see Note 8) to be used for various purposes connected with the planning, modernization and expansion of transportation facilities. These grants are deferred until such time as the related facilities are put into service. The credits are then amortized over the estimated useful life of the assets as a reduction of Unreimbursed Cost of Service.

(2) Railroad Commuter Subsidies

Under Chapter 24 of the Acts of 1967 and Chapter 728 of the Acts of 1968, as amended, the Authority and the Commonwealth of Massachusetts entered into agreements whereby the Commonwealth will subsidize, up to certain specified limits, 100% of the cost of financing agreements with the railroads to provide service to and from Boston from August 1, 1972 through July 31, 1973. In accordance with these agreements, financial assistance paid or payable to the Boston & Maine and Penn Central Railroads and expenses related thereto amounted to \$8,833,508 during the year ending December 31, 1973; \$4,513,946 paid by the Commonwealth and \$4,319,562 paid by the Authority. The cost to the Authority of providing the railroad service after July 31, 1973, is not subsidized by the Commonwealth except through contract assistance for net cost of service (Note 7).



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 1973

(Continued)

(3) Relocation of Facilities

In April, 1967, the Authority entered into an agreement with the John Fitzgerald Kennedy Library Incorporated, whereby the Authority would relocate certain transportation facilities in order to convey certain properties to the United States and the Library Corporation.

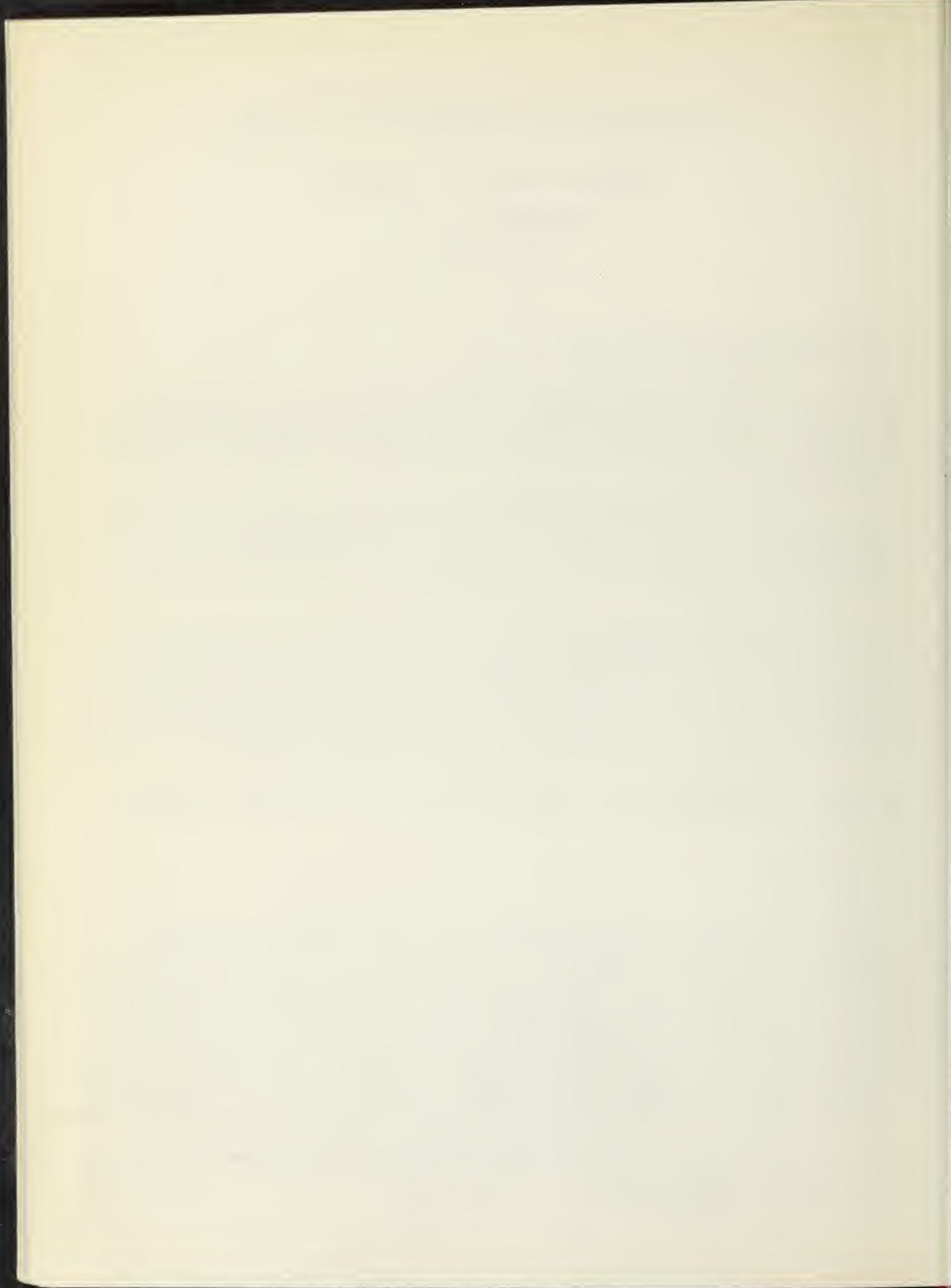
The Commonwealth of Massachusetts appropriated \$6,098,400 to the Authority for the part of the properties conveyed to the United States. In addition, the Authority received \$1,330,112 from the Library Corporation for the remaining part of the properties, totaling \$7,428,512.

These facilities, having a net book value of \$709,807, have been retired. The amount received in excess of net book value (\$6,718,705), less \$12,000 of expenses incurred in connection with the acquisition of replacement property, is included in Deferred Credits on the balance sheet. When the replacement facilities are constructed, this credit will be amortized over their estimated useful lives as an offset to the applicable depreciation expense.

In December, 1969, the Authority purchased for \$7,000,000 a parcel of property to be used to replace the facilities conveyed in 1967.

(4) Pension

The Authority has agreed to provide retirement benefits to employees through a contributory pension plan which, as currently amended, requires the payment by the Authority of an amount equal to 11-5/8% of the total payroll of employees who are members of the plan. The total pension cost to the Authority for the year ended December 31, 1973, was approximately \$11,047,000 which was funded currently and includes interest on unfunded past service costs but does not include amortization of the unfunded past service costs. The Authority is not legally obligated, under the agreement, to fund the actuarial cost of future benefits to present and retired employees based on past service costs. The most recent actuarial valuation was made as of December 31, 1972, and at that time unfunded past service costs approximated \$98,000,000. The actuarially computed value of the vested benefits of the plan as of December 31, 1972, exceeded the pension fund assets by approximately \$44,000,000.



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 1973

(Continued)

(5) Long-Term Debt

The legislative act under which the Massachusetts Bay Transportation Authority was established provides, among other things, if at any time any principal or interest is due on any bond or note issued or assumed by the Authority and funds to pay the same are not available, the Commonwealth of Massachusetts shall thereupon pay over to the Authority the amount required to meet such obligations.

(6) Construction Program

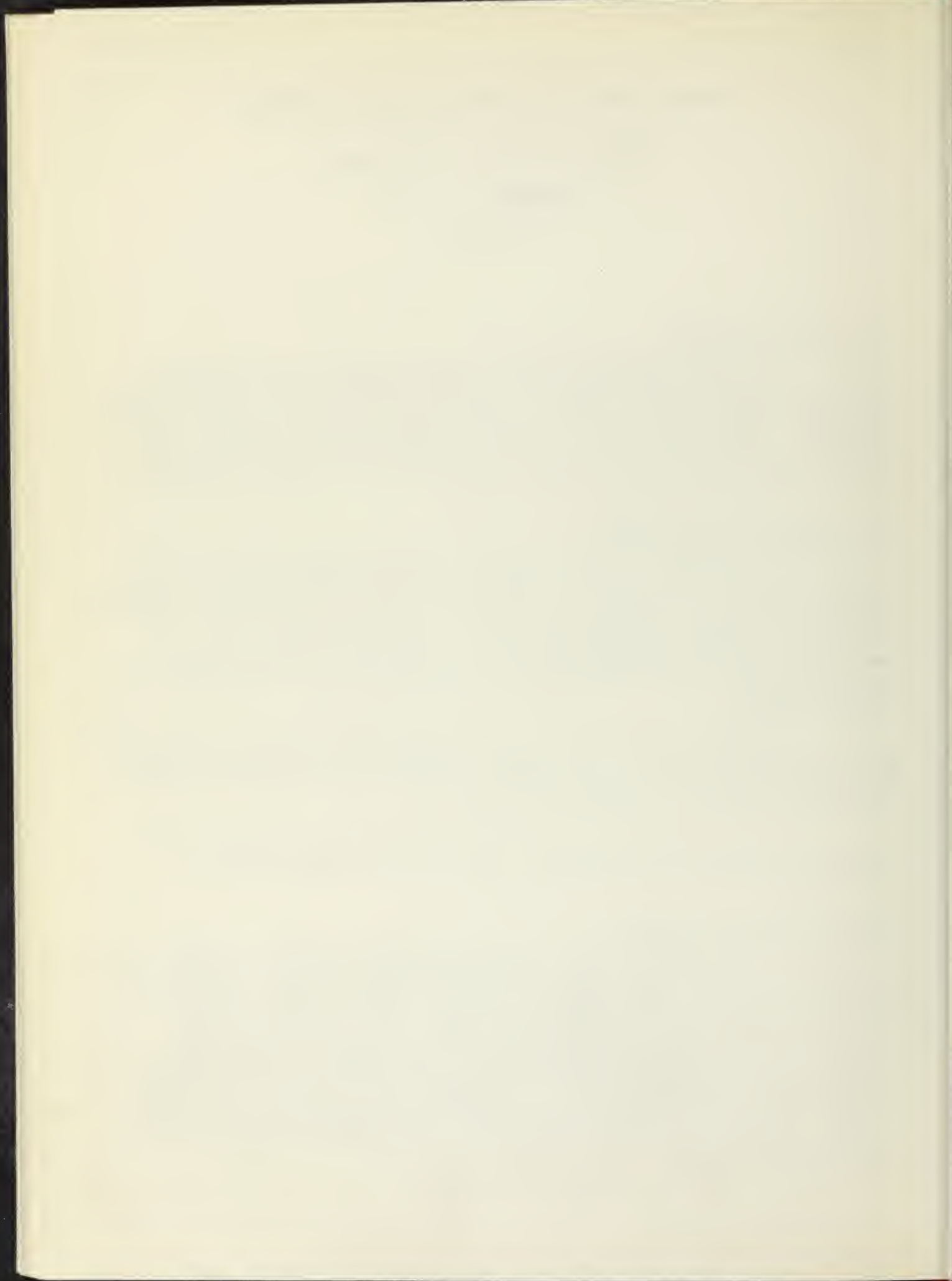
The Authority's program for mass transportation within the area constituting the Authority involves a total estimated cost of \$1.1 billion. Financing requirements for the program are expected to be met through various sources, including the issuance by the Authority of \$389,000,000 of long-term debt securities. The remaining financing requirements are expected to be met through Federal transit aid, Federal urban renewal funds and relocation cost reimbursements.

Expenditures on the program through December 31, 1973, have been financed through the issuance of \$215,000,000 of Massachusetts Bay Transportation Authority General Transportation System Bonds, and other sources as mentioned above.

As of December 31, 1973, the Authority has entered into purchase commitments amounting to approximately \$104,000,000.

(7) Contract Assistance

The legislative act authorizing the issuance of debt securities currently provides for participation by the Commonwealth of Massachusetts in the payment of annual debt service costs on bonds issued by the Authority as follows: On the \$175,000,000 of bonds issued prior to January 1, 1971, the debt service on \$144,800,000 is eligible for contract assistance at either 90% or 50%, as provided by contract; the annual debt service on bonds issued after January 1, 1971, is eligible for contract assistance at 90%. However, regardless of when issued, contract assistance on debt service will not be extended to over \$257,000,000 of bonds issued at any time.



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 1973

(Continued)

(7) Contract Assistance (Continued)

In 1973, the Commonwealth enacted legislation which provided the Authority with an additional \$35,000,000 of contract assistance for the 1973 cost of service. This additional contract assistance is not assessable to the 79 cities and towns constituting the Authority and is applied for assessment purposes as a reduction of all cost items comprising the 1973 net cost of service of the Authority.

(8) Grants

Under the Urban Mass Transportation Act of 1964, the Department of Transportation has approved for the Authority grants aggregating \$271,000,000. The Authority has received \$93,079,760 of this amount. These funds have been used by the Authority to purchase new buses and to modernize and expand mass transportation facilities.

Under an agreement between the Boston Redevelopment Authority and the Massachusetts Bay Transportation Authority, the BRA has approved grants aggregating \$12,000,000 in connection with the expansion of mass transportation facilities. The Massachusetts Bay Transportation Authority has incurred costs totaling \$10,663,317 related to this agreement. Of this amount they have not yet been reimbursed by the BRA for \$5,306,314 which is included in accounts receivable. Although substantially all of this amount and other amounts receivable from the BRA are past due, in the opinion of management, the receivable is collectible.

During 1973, \$1,853,690 of Federal grant amortization has been credited to the unreimbursed cost of service.

(9) Unamortized Expansion and Modernization Costs (Note 1)

Under the original Railroad Contract Assistance Program the Authority incurred costs which totaled \$5,000,000, which are being amortized to cost of service over fifteen years. The



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 1973

(Continued)

(9) Unamortized Expansion and Modernization
Costs (Note 1) (Continued)

amortization in 1973 amounted to \$325,000, and the unamortized balance at December 31, 1973 was \$3,050,000. In addition, in connection with the Authority's acquisition of the Eastern Mass. Street Railway Company in 1968, costs of \$611,362 were not assigned to tangible assets. These costs are being amortized by charges to cost of service over forty years. Amortization in 1973 amounted to \$15,284 and the unamortized balance at December 31, 1973 was \$534,942.

The other deferred expenses relating to the expansion and modernization of the Transportation System are being amortized by charges to cost of service over forty years commencing in 1972. Amortization in 1973 amounted to \$131,592 and the unamortized balance at December 31, 1973 was \$5,004,559.

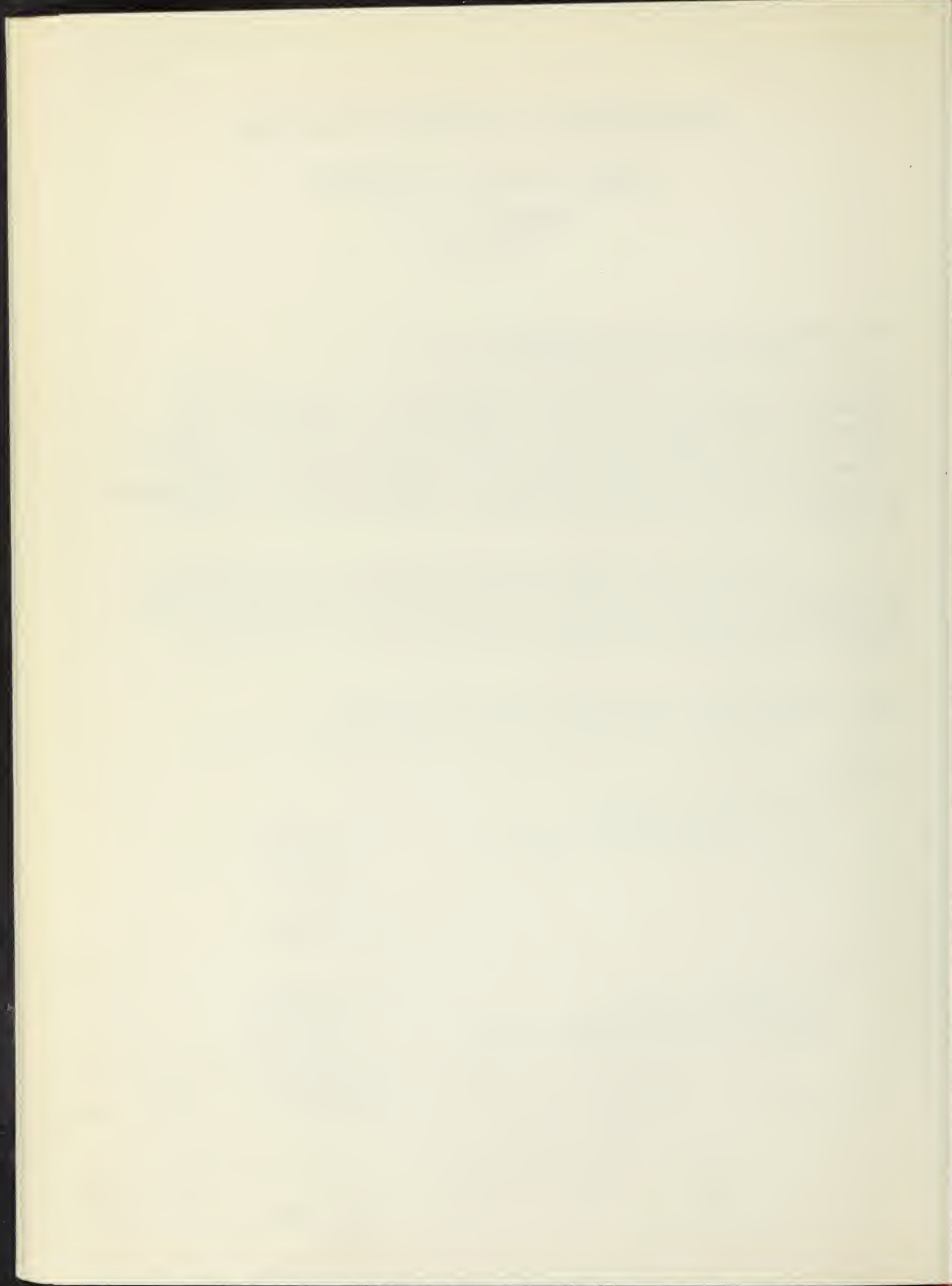
(10) Supplementary Operating Expense Information

Operating expenses captioned below consist of the following:

Transportation services-	
Salaries and wages	\$53,159,220
Taxes, including payroll taxes	3,219,697
Fuel	1,436,234
Other	2,036,210

	\$59,851,361
	=====
Maintenance-	
Salaries and wages	\$24,873,070
Materials and supplies	8,519,720
Taxes, including payroll taxes	1,160,349

	\$34,553,139
	=====



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 1973

(Continued)

(10) Supplementary Operating Expense Information (Continued)

Electric power-	
Salaries and wages	\$ 2,760,648
Power purchased	1,026,390
Fuel	3,122,558
Taxes, including payroll taxes	124,323
Other	219,550

	\$ 7,253,469
	=====

(11) Property Held for Expansion

On January 26, 1973, the Authority purchased 145 miles of the Penn Central Railroad's right of way and related properties in Eastern Massachusetts. This purchase was financed with a \$19.5 million loan from the Federal Department of Transportation. The property acquired is pledged as security for the loan.

The loan agreement provides for the Authority to repay 25% of the principal plus accrued interest at the earlier of (a) January 26, 1983, (b) the date a grant agreement for actual construction of mass transportation facilities is made, or (c) the date a decision is made not to use the property for mass transportation. The balance of the principal amount is payable out of the proceeds from the sale of property, if any.

Interest amounting to \$1,262,422 has been accrued in the accompanying financial statements at December 31, 1973, and charged to cost of service. However, this interest is not included in "net cost of service" assessable to the 79 cities and towns until the year it is paid.



